

RHONDDA URBAN DISTRICT COUNCIL

REPORT

OF

The Medical Officer of Health

FOR THE

YEAR 1908

TREHERBERT :

I. JONES, PRINTER, ETC., STATIONERS' HALL.

RHONDDA URBAN DISTRICT.

MEMBERS OF THE COUNCIL :

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„ GRIFFITH EVANS.
„ DANIEL RICHARD JONES.
„ WILLIAM THOMAS JONES, J.P.
„ WILLIAM PHILLIP THOMAS.
„ ALFRED GDADSTONE TRIBE.
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„ WILLIAM THOMAS.
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„ WILLIAM THOMAS DAVIES.
„ THOMAS HARRIES.
„ WILLIAM HENRY MATHIAS, J.P.
„ DAVID SMITH.
„ HENRY EDWARD MALTBY.
„ DANIEL EVANS.
„ THOMAS GEORGE.

Clerk to the Council, WALTER P. NICHOLAS.

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 „ WILLIAM EVANS THOMAS, M.D.
 „ DAVID CHARLES EVANS.
 „ LEMUEL PRICE GRIFFITHS.
 „ WILLIAM THOMAS DAVIES.
 „ THOMAS HARRIES.
 „ HENRY EDWARD MALTBY.

OFFICIALS OF THE HEALTH DEPARTMENT:

*Medical Officer of Health and Medical Superintendent of the
 Fever Hospital.*

J. D. JENKINS, M.D., B.S. (London), D.P.H., &c.

Matron of the Hospital—Miss ROSE E. SMITH.

Sanitary Inspectors—

No. 2 District, J. TOWY THOMAS, (Cert. San. Institute).

„ 1	„	WM. WILLIAMS	„
„ 6	„	GWILYM REED	„
„ 3	„	JAMES WILLIAMS	„
„ 4	„	DANIEL W. JONES	„
„ 5	„	LEWIS T. DAVIES	„

Clerks—EVAN R. JENKINS.
 EVAN EVANS.

In Charge of Disinfectors—R. J. JONES.
 RICHARD HERN.

TELEPHONE NUMBERS:

Medical Officer of Health—Office...	...	39 Pentre P.O.
„ „ „ „ „	...	7c Pentre Nat.
„ „ „ Residence	...	47x Pentre P.O.
Fever Hospital	...	47 Pentre P.O.
Inspector No. 1 District	...	2 Treherbert „
„ „ 2	...	17 Pentre „
„ „ 3	...	8 Tonypandy „
„ „ 4	...	13 „ „
„ „ 5	...	3 Porth „
„ „ 6	...	2 Ferndale „

RHONDDA URBAN DISTRICT.

Area	...	...	...	23,884 acres.
Population (Census April 1st 1901)	...		...	113,735
Population (Midsummer)	...		...	133,137
Rateable Value	...	...	...	£622,833
Birth Rate	...	...	...	41·0 per 1,000
Average of previous 10 years			...	39·1 ,,
Death-rate (all causes)	...		...	18·9 ,,
Average of previous 10 years			...	19·0 ,,
Zymotic Death-rate	...		...	4·0 ,,
Average of previous ten years			...	3·4 ,,
Death-rate from Phthisis (Consumption)...				·77 ,,
Average of previous 10 years			...	·81 ,,
Infantile Mortality	...			184 per 1,000 births.
Average of previous 10 years	...		...	190 ,,

INDEX TO CONTENTS.

A

	PAGE.
Abatement of Nuisances	119
Accidents in Collieries	33, 116
Acts—Adoptive	47
,, Coal Mines Regulations	67
Act—Employment of Children... ..	66
,, Factory and Workshop	66, 67
,, Notification... ..	47
,, Notification of Births	14
,, Prevention	47
,, Public Health Acts (Amendment)	47
,, Shop Hours Act	65, 66
Administration	64, 65
Ages at Death	11, 127, 128
Area	4, 5

B

Bakehouses	122
Births... ..	7, 8, 74, 75, 77
,, in Wards	75, 124, 125
Birth-rates	7, 74, 75, 77
,, Comparative	7, 74
,, in Wards	8, 75
Bradford & Co., Messrs.	37, 38

INDEX.—*continued.*

C				PAGE
Chapels	...	...	...	118
Churches	...	...	...	118
Classification of Diseases	...	...	...	127, 128
Coal Mines Regulation Acts	...	...	...	67
Colliery Accidents	...	...	...	33, 116
Common Lodging Houses	...	...	...	46
Complaints	...	...	...	120
Cost of Scavenging...	...	...	...	44
County Laboratory	...	...	...	55
Cowsheds	...	...	...	120
D				
Dairies	...	...	...	122
Deaths	...	...	9-11, 77, 78, 127, 128	
,, in Age groups	...	...	...	11
,, at Public Institutions	...	...	...	10
,, Diseases causing most	...	...	...	10
,, Uncertified	...	...	...	11
,, in Wards	...	...	...	10
Death-rates	...	...	...	9, 77, 78
,, Comparative	...	...	...	10
,, in Great Towns	...	...	...	10, 79, 83
,, in Wards	...	...	...	...10, 78
Destructor, Refuse...	...	...	...	41-43
Diarrhœa	...	...	...	24-30, 111
,, Causes of	...	...	...	...27, 28
,, Exceptional Prevalence of	...	...	...	24
,, Mortality from	...	...	...	24
,, Nomenclature	...	...	...	25
,, Prevention of	...	...	...	28-30
,, Relation to Temperature and Rainfall	...	...	...	111
Diet Cards	...	...	...	28-30

INDEX.—*continued.*

	PAGE
Diphtheria	19-22, 97-103
„ Incidence of	20, 21, 98, 100, 101
„ Isolation of	20, 34, 35
„ Mortality from ... ..	... 20
„ Overcrowding in Infected Houses	21, 102, 103
„ Prevalence of ... ..	... 19
„ Reduction of Secondary Cases ...	... 21
„ Ward Distribution of ... ..	...21, 99
Disinfection ... ..	... 48
Disposal of Refuse ... ..	...41-44
District Population ... ..	... 72
District Rates ... ..	... 73

E

Earth Temperature 111
Employment of Children Act ... ..	... 66
“ Equifex ” Disinfector ... ..	... 48
Evans, Mr. Evan ... ..	... 65
Evans, Mr. Evan (Clerk of Works) ...	... 37
Evans & Bros., Messrs. E. R. ... ..	...37, 38
Explosions, Influence of, on Death-rate	... 117

F

Factory and Workshop Act66, 67
Fernhill Houses ... ..	... 50

G

Gough Bros. 37
Great Towns	79, 82, 83

INDEX.—*continued.*

H

	PAGE
Hampton & Co., Messrs. ...	37, 38, 41
Health Visitors ...	14
Hospital (Penrhys) ...	38-41
,, ,, Caretaker ...	40
,, ,, Cost of ...	40, 41
,, ,, Water Supply of ...	40
,, (Tyntyla) ...	33-38
,, ,, Case Mortality ...	34
,, ,, Expenditure ...	35, 36
,, ,, Extensions, Cost of ...	37
,, ,, Painting and Repairing ...	37
House Accommodation ...	62-64
,, Census ...	62
Houses occupied in Wards ...	75, 78
,, passed in recent years ...	64
,, ,, Wards ...	63

I

Illegitimacy ...	8, 9
Illegitimate Births ...	8
Illegitimate Birth-rate corrected ...	8, 9
Illegitimates, Deaths of ...	9
Infantile Mortality... ..	1, 2, 13-15, 80-82
Infantile Mortality, Chief causes of ...	14, 80-82
Infantile Mortality, Compared with Great Towns	13, 14, 82
Influenza ...	32
Inquests ...	11, 33, 116
Inspectors' Work ...	119, 120
Introductory Letter ...	1, 2

J

Jenkins, Mr. E. R. ...	65
------------------------	----

INDEX.—*continued.*

			PAGE
Jones, Inspector D. W.	...	...	46
Jones, Mr. W. J.	...	...	39

L

Laboratory, County	55
Lead-poisoning	...	...	53-62
Llewellyn, Mr. Evan	...	...	73
Llyn Fawr Water Scheme	...	...	49
Llywelyn, Dr. T. R.	...	...	56
L. G. B. Tables	...	...	123-130
Lodgers, Number of	...	...	140
Lodging Houses	...	...	46

M

Measles	16, 17
,, School closure due to	...	...	17
,, in Wards	...	...	17
Medical Inspection of School Children	...	...	69
Meteorology	...	...	131-133
Midwives	...	...	31
Midwives' Act	...	...	30, 31
Milkshops	...	...	122
Morgan, Mr. W. D.	...	...	37
Mortality, Infantile	...	...	13-15, 80-82
Mortality, Infantile, Chief causes of	...	...	14, 80-82
Mortality, compared with Great Towns	...	...	13, 14, 82

N

Natural Increase in Population	5, 7
New Houses	...	...	118
Nicholas, Mr. W. P.	...	...	58

INDEX.—*continued.*

	PAGE
Notifications ...	88-90, 93, 97, 104, 112
Notification of Births' Act ...	14
Nuisances Abated ...	119

O

Offensive Trades ...	122
Overcrowding in Infected Houses 19, 21, 23, 95, 103, 109, 110	

P

Penny Rate, Value of ...	73
Periodical Inspections, Premises requiring ...	122
Persons per House ...	72
„ „ in Infected Houses ...	110
Phthisis ...	31, 32, 114, 115
„ Relation to Occupation ...	32, 115
Plans Passed ...	118
Pontypridd Water-works Company ...	51-53
„ „ and Tramroad Act, 1908 ...	52, 53
Population ...	5, 6, 72
„ in Wards ...	75, 78
Powell, Mr. W. ...	12
Puerperal Fever ...	37, 38, 112, 113
„ „ Definition of ...	31

R

Rainfall ...	131-133
Rateable Value ...	73
Refuse Destructor ...	41-43
„ Disposal ...	41-44
Reports Presented ...	46, 47
Rees, Mr. T. J. ...	65

S

	PAGE
Scarlet Fever	17-19, 89-95
„ „ Distribution of	18
„ „ Incidence of	18, 91, 93
„ „ Isolation of	19
„ „ Mildness of Type	18
„ „ Mortality from	18, 92
„ „ Overcrowding in Infected Houses ...	19, 95
„ „ School Incidence	94
„ „ Secondary Cases	18, 94
Scavenging	41-44
„ Cost of	44
School Children, Medical Inspection of ...	69
Seventy-six Great Towns	79, 82, 83
Sewerage	44-46
„ Cost of	44
„ Effect of Subsidence on	44
Shop Hours Act	65, 66
Slaughter-houses	122
Small Pox	16
„ Hospital (Penrhys)	38-41
Smith, Miss R. E.	38
Still-born Children... ..	12, 13
„ „ Relation of to, Premature Birth ...	12, 13
Subsoil	4

T

Thomas, Inspector J. Towy	46
Thomas, Mr. Octavius	38, 49, 51
Topography	3, 4
Typhoid Fever	22, 23, 104-109
„ Comparison with England & Wales ...	22
„ Comparison with Great Towns	22

INDEX.—*continued.*

	PAGE
Typhoid Fever, Diminished prevalence ...	22
„ Distribution of... ..	22
„ Incidence of ... 22, 23, 105, 106, 108	
„ Isolation of 22, 34, 35	
„ Mortality from... .. 22, 107	
„ Overcrowding in Infected Houses	23, 109
„ Secondary Cases	23

U

Uncertified Deaths	11
Unconnected Houses	44-46
Unsound Food	47

W

Warrington, Mr. Justice	59
Water, action on Lead	53-62
Water Supply	48-53
„ Blaenrhondda	50
„ Caroline Street... ..	50
„ Clydach Vale	50
„ Council's	49, 50
„ Cwmparc	50
„ Fernhill	50
„ Llwynypia	50
„ Private Supplies	50, 51
„ Ystrad	50
Whooping Cough	23, 24
Williams, Mr. George	30
Williams, Dr. W.	31
Workshops and Workplaces in Districts ...	121
„ „ „ Wards	68

INDEX.—*continued.*

Z

	PAGE
Zymotic Deaths	15
„ Death-rate	15, 83
„ „ Comparison, England & Wales	9, 15, 85
„ „ in Great Towns	15, 83
„ „ in Wards	16, 86, 87
„ Diseases	15, 16, 84
„ „ Incidence of	16

RHONDDA URBAN DISTRICT COUNCIL.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR 1908.

*To the Chairman and Members of the Council and
of the Education Committee.*

MRS. NICHOLAS AND GENTLEMEN,—

I have the honour to present for your consideration my eighth annual report upon the vital statistics and sanitary condition of your district during 1908. With the report is incorporated a section on the Medical Inspection of Children attending the elementary schools throughout your district, but as it was not practicable to commence such inspection in the course of 1908, the remarks offered are merely explanatory of the delay and no report on work done is possible in this connection.

Two of the matters referred to in my last and many previous reports,—an improvement in the mode of refuse disposal and the reduction of the high infantile mortality now obtaining in the district,—are at the present time receiving the earnest attention of your Health Committee, and it is hoped that important steps will have been taken in relation to both problems before the issue of the next annual report.

After a satisfactory solution of these questions, much will yet remain to occupy the time and to engage the attention of the Council; among the most important may be mentioned:—

- (1) The adoption of special steps designed to still further reduce the already low mortality from pulmonary consumption in the district.
- (2) The prevention of the pollution of the rivers and streams throughout your district.
- (3) The acquisition of more recreation grounds especially for children.
- (4) An improved system of inspection of meat and other foods.

I am,

Yours faithfully,

J. D. JENKINS.

The Council Offices,
Pentre.

TOPOGRAPHY.

The district, with an area of 23,884 acres is about 12 miles long by about $4\frac{3}{4}$ miles across at its widest part. It is irregularly oval in shape, its greatest width lying between a point close to the junction of Mountain Ash, Aberdare, and Rhondda Urban Districts at Blaenllechau, and a point south-west of Gelli, on the boundary between the Rhondda and the Ogmore and Garw Urban Districts. The district as a whole consists of two narrow, tortuous valleys, which gradually approach each other in their course southwards, and join at Porth, and thence the single valley so formed runs a short course before merging into the upper end of the Pontypridd Urban District at Trehafod. The two valleys, running at first at some distance from each other, together with the single valley formed by the junction of the other two, are so arranged that they resemble an irregularly shaped Y. The stem of the Y is formed by the portion of the district extending from Trehafod to Porth and is over a mile long. The limbs, of unequal length, are formed by the Rhondda Fawr Valley, which is about $9\frac{1}{2}$ miles long, and by the Rhondda Fach Valley, which is of a length barely $6\frac{1}{2}$ miles. Both the valleys at their upper extremities end blindly, or form *cul-de-sacs*; their lateral boundaries are formed by steep hills, which vary in height from about 560 feet on either side of Trehafod, to 1,340 feet on the north-east of Maerdy, and 1,742 feet on the south-west of Treherbert. The Rhondda Fawr and the Rhondda Fach Valleys are separated by a steep ridge—Cefn Rhondda—which rises from a point 600 feet just above Porth to an elevation of 1,692 feet near the upper extremity of the district. The Rhondda River—formed at Porth by the junction of Rhondda Fach and Rhondda Fawr Rivers—is 240 feet above sea-level at the lowest point in the district, at Trehafod, while the Rhondda Fawr River attains an

elevation of 720 feet at Blaenrhondda and the Rhondda Fach the still greater elevation of 920 feet at Maerdy. The highest point in the district is Carn Moesau, which is 1,950 feet high, and is situated at the upper end.

The valleys are very narrow, and allow in many places only sufficient space for the three R's—river, road, and railway. Although the district is a large one, the area actually built upon is comparatively small, for suitable and convenient building ground can be obtained only in close proximity to the river. Here and there, however—as at Treorchy and Ton—the valleys open out a little, and it is mainly at these expansions that considerable numbers of houses have been erected. Leading out of the main valleys are a few side valleys, of which Cwmparc, Clydach Vale, and Cymmer are the most important.

The prosperity of the district is entirely dependent upon its coal, which, in its steam-raising properties, is reputed to be inferior to none.

THE SUBSOIL.

The coal-bearing strata are overlain by Pennant Sandstone, of which the large majority of the houses in the district are built. Scattered over the district are small areas of clay underlying peat, the latter being sufficiently abundant in some portions of the district to affect the colour and taste of the water. At the few expanded portions of the valleys the rivers are bounded by meadows whose soil is alluvial in character.

AREA.

The district has an area of 23,884·810 acres, and thus forms the most extensive Urban District in the County of Glamorgan, the next in size being Margam Urban District,

with an area of 18,417 acres and a population of 9,014 at the last census.

The Rhondda Urban District is, however, exceeded in area by seven out of the nine Rural Districts in the County.

POPULATION.

Estimate 133,137.

By the application of the theory that the rate of growth of a district ascertained to have taken place during one intercensal period continues to be maintained during the period immediately following, the population of the Rhondda is estimated to have reached 133,137 persons in the middle of the year 1908. This is the method used by the Registrar-General in his periodical reports for the country generally and the total so obtained is again adopted throughout this report, so as to avoid detracting from the value and interest of the comparisons made with other districts now rendered possible by reference to the Registrar General's reports dealing with the whole country.

Confirmatory evidence of the accuracy of this estimate is given by taking into consideration the extent to which the population has "naturally increased," in other words, by the addition of the excess of the total births over the total deaths since the last census year to the number of the population enumerated in the district in that year. The figure thus obtained amounted to 132,711 at the end of June, 1908, or only 426 below the total arrived at by the first method.

A third method of estimating the population is dependent upon the number of houses occupied throughout the district at a given time, the average number of persons per house being assumed to have remained approximately constant since the last census enumeration in 1901, when it was ascertained to be

5·92 persons per house. On this assumption the estimated population for the whole district attains a very high figure,—no less than 140,819, or over 7,000 persons in excess of the totals arrived at by the two other methods already mentioned. There is however sufficient evidence of a convincing character that since the last census year (1901) the rapid rate at which building has progressed, especially during the last five years, has served to materially reduce the average number of persons per house throughout the district. In the course of 1908, it was considered expedient for Parliamentary purposes in opposition to the promotion of the Pontypridd Waterworks Bill of that year to take a house-to-house census of all the houses supplied by the Company within the Rhondda. The figure varied in the different localities, Maerdy possessing the highest average per house, but for the whole of the Company's water area within the Rhondda the average was 5·8 persons per house. Considered in conjunction with a similar census taken within a more limited area at Ystrad and Trealaw in 1905, which resulted in an average count of 5·7 persons per house and with other data incidentally ascertained by the sanitary inspectors in the course of their routine inquiries, the factor mentioned justified the opinion that the average number of persons for the whole of the Rhondda Urban District does not exceed 5·7 persons per house. According to these data therefore the estimated population in the middle of 1908 reached a total of 135,580 persons, or 2,443 in excess of the estimate adopted for the purpose of this report.

According to the official publications of the Registrar-General, Rhondda maintains its position as the 24th largest place in point of population among the 76 large towns in England and Wales.

Table 1 in the appendix gives certain statistics bearing upon the population in each census year since 1801.

BIRTHS.

		Average of Ten Years.	
		1908.	1898-1907.
Number of Births	... 5,454		4,620
Birth-rate in Rhondda	... 41'0		39'1

In the course of the year 1908, 5,454 births were registered as having occurred within the Rhondda Urban District; this number is equivalent to a birth-rate of 41'0 per 1,000 of an estimated population of 133,137.

This total exceeds the average of the totals for the previous ten years by no fewer than 834 and it is very satisfactory to note that the birth-rate, which had been declining since 1902 has again risen and exceeds the previous year's rate by 4'0, and the average rate for the ten previous years by 1'9 per 1,000.

The birth-rate of the country as a whole is diminishing gradually although the rate for England and Wales was '2 per 1,000 greater in 1908 than in 1907. (Table 4.)

The birth-rate in Rhondda exceeds that of England and Wales by 14'5 per 1,000 and that of the 76 Great Towns taken as a whole by 14'0. (Table 4.) Rhondda maintains its position among the 76 large towns as the district possessing the highest birth-rate with 41'0 per 1,000. Middlesbrough with a rate of 35'9 being the next highest, and Hastings with a rate of only 15'5 being the lowest in the list.

The "natural increase" or the excess of births over deaths in 1908, amounted to 2,938, and is larger than the corresponding number for the previous year by 240.

The number of births in the 4 successive quarters of the year were 1,383, 1,326, 1,350, and 1,395.

In accordance with the general rule, the number of males born during the year was in excess of the number of females, the respective totals being 2,777 and 2,677.

The birth-rate varies considerably in the different wards, the extremes varying between 47·1 in ward 6 and 33·1 in ward 8. (Table 5.)

ILLEGITIMACY.

There is a slight increase in the number of illegitimate births recorded during the year under consideration as compared with those of several years immediately preceding.

The numbers for the last five years are respectively 100, 100, 101, 107, and 119, the last being the figure for 1908. This number is equivalent to a rate of 22 per 1,000 births, which is identical with that belonging to the previous year. The rate per 1,000 births for the whole of England and Wales in 1907 was 37; the figures for 1908 have not yet been published.

It is recognised however that an estimate of the prevalence of illegitimacy should be based upon the proportion of the unmarried and widowed women between the ages of 15 and 45, to the total population.

For the Rhondda this ratio was found to be 7·5 per cent. of the population at the last census; if the same proportion be assumed to continue to exist the number constituting this section of the Rhondda population in 1908 amounted to 9,985 women.

On this basis the proportion of illegitimate births registered in the district in 1908 was 11·9 per 1,000 of all unmarried and widowed women of conceptive age.

According to this estimate the prevalence has increased, the corresponding rate for the previous year being 10·9. This rate also compares very unfavourably with the corresponding rate for England and Wales as a whole which was 7·8 per 1,000 in 1907.

The rate for 1908 in England and Wales has not yet been published but there has been a uniformly progressive decline in the illegitimate birth-rate calculated in this manner since 1876.

The mortality among illegitimate children is always found to be much higher than the general infantile mortality. Thus in the course of the year 41 deaths of illegitimate children were registered, of whom 29 or 72 per cent. were under one year of age. This gives an infantile mortality of 244 per 1,000 births among the illegitimates as compared with 182 per 1,000 which is the rate for legitimates alone.

DEATHS.

				Average for the Ten Years.
				1898-1907.
		1908.		
Number	...	2,516		2,233
Rate per 1,000 in Rhondda	...	18·9		19·0
„	„ in 76 Great Towns	14·9		
„	„ in England & Wales	14·7		16·4

A total number of 2,446 deaths were registered in the Rhondda Urban District during the year 1908. This number refers only to deaths which occurred within the Rhondda Urban District, while the number 2,516 given above is the corrected total number of deaths belonging to the district, and is found by deducting from the registered total the number of deaths of non-residents which occurred in the district, and adding the number of deaths of Rhondda residents which occurred elsewhere.

Ten persons died during the year in the Rhondda Urban District who were not resident therein, and 80 Rhondda residents died in institutions outside the district. Of the latter, 13 died at Cardiff Infirmary, 44 at the Pont-ypridd Workhouse, and 23 at the Bridgend Asylum.

The nett number of deaths, 2,516, is equivalent to a death-rate of 18·9 per 1,000 per annum. This rate is higher by 2·5 than the previous year's death rate, although it is a fraction under the average for the ten previous years.

In comparing the Rhondda general death-rate with that of the rest of the 76 great towns we find that Rhondda occupies the 72nd place on the list; that is to say, only 4 of these towns had higher death-rates than this district in 1908 (Table 9). If the 76 great towns be taken collectively the general death-rate per 1,000 of the living population amounted to 14·9, or 4·0 per 1,000 below that of Rhondda for the same period.

The diseases which contributed most largely to the death-roll of the district were, diarrhoea, lobular pneumonia, bronchitis, heart disease, consumption, and measles, with the respective totals of 319, 234, 173, 144, 103, and 102.

The death-rates belonging to the different wards show the usual well marked differences. The order of the wards in respect of the lowness of their death-rates varies from year to year, and the period of time for which statistics are available is as yet too short to definitely determine which wards have consistently the lowest death-rates. (Table 8.) Moreover the local fluctuations in population consequent upon the want of regularity in building development in the respective wards, seriously detract from the accuracy of all estimates or calculations based on population within comparatively small and contiguous areas.

The number and percentage proportion of the deaths divided into their respective age-groups which occurred in the Rhondda during the year were as follow :—

1,002, or 40 per cent., under 1 year of age.
 390, or 16 per cent., over 1 year and under 5 years.
 85, or 3 per cent., over 5 and under 15 years.
 97, or 4 per cent., over 15 and under 25 years.
 662, or 26 per cent., over 25 and under 65 years.
 280, or 11 per cent., over 65 years.

UNCERTIFIED DEATHS.

During the year 1908, 2,516 deaths were registered as having occurred within the Rhondda Urban District.

Inquests were held by the district Coroners upon 158, while 18 were uncertified by either Coroner or Medical Attendant; the remaining 2,340 were certified by registered medical practitioners.

The respective proportions of the certified deaths, inquest cases, and uncertified deaths, to the total number of deaths, were 93, 6·28 and ·7 per cent.

In the case of the 18 uncertified deaths, the causes of death assigned were as follow :—

Convulsions	...	...	10
Debility	...	...	2
Cardiac Failure	...	...	3
Premature Birth	...	...	2
Effects of Parturition	...	...	1
<hr/>			
Total	...	...	18

4 out of the 18 were less than a day old at the time of death, and 5 more died within 10 days of birth.

STILL-BORN CHILDREN.

I am indebted to Mr. Powell, the Clerk to the Burial Board, for a record of the number of still-born children brought to the three cemeteries for burial during the years 1897-1908.

Year.	No. of Still-born recorded.		No. of Births registered.		Rate per 1,000 Births.	Average for 6 year periods.
1897	...	229	...	4,109	...	55·7
1898	...	210	...	4,120	...	50·9
1899	...	271	...	4,089	...	66·3
1900	...	312	...	4,469	...	69·6
1901	...	348	...	4,586	...	75·9
1902	...	333	...	4,937	...	67·5
						64·3
1903	...	333	...	4,897	...	68·0
1904	...	301	...	4,860	...	61·9
1905	...	367	...	4,664	...	78·7
1906	...	323	...	4,751	...	67·9
1907	...	346	...	4,831	...	71·6
1908	...	354	...	5,454	...	64·9
						68·8

The statistics pertaining to the country as a whole which are issued by the Registrar General lead to the conclusion that the mortality from premature birth is on the increase. Some workers on this subject have suggested as an explanation that this recorded upward tendency in the mortality rate from premature birth may be taking place at the expense of the number of children recorded as still-born. The above table however does not support the latter view, for in dealing with the whole of the period for which accurate figures for Rhondda are available, the rate of the still-births in relation to the total number of births has been higher by 4·5 per 1,000 during the latter half of the period.

During the same term, the relation of the number of deaths attributed to prematurity to the total number of births registered is also found to be higher in the latter half although to a much less appreciable extent than in the case of the still-births, as shown in the following table:—

Year.	Deaths from			No. of Births	Rate per		Average for
	Premature	Birth.		Registered.	1,000	Births.	6 years.
1897	...	72	...	4,109	...	17·5	14·2
1898	...	53	...	4,120	...	12·8	
1899	...	56	...	4,089	...	13·6	
1900	...	66	...	4,469	...	14·7	
1901	...	74	...	4,586	...	16·1	
1902	...	53	...	4,937	...	10·7	
1903	...	84	...	4,897	...	17·1	14·8
1904	...	69	...	4,860	...	14·1	
1905	...	62	...	4,664	...	13·3	
1906	...	69	...	4,751	...	14·5	
1907	...	68	...	4,831	...	14·1	
1908	...	88	...	5,454	...	16·1	

INFANTILE MORTALITY.

	Average for the	
	1908.	Ten Years. 1898-1907.
Rhondda per 1,000 births	... 184	190
76 Great Towns ...	... 129	—
England & Wales...	... 121	142

The Infantile Mortality of a district for any year is the proportion which the number of deaths of children under one year of age bears to every thousand births during that year. It is therefore not directly calculated on the total population, which is an uncertain quantity especially in years far removed from a census year. The encouraging reduction in the infantile mortality of the district which it was possible to record in the annual reports for the two

previous years was not maintained during the year 1908, although the rate for that year,—184 per 1,000 births—is below the average rate of 190 which pertains to the ten previous years. During the decennium 1898—1907, the infantile mortality for 1908 was exceeded on six occasions, the extremes for that period varying from 158 in 1903 to 248 in 1899. As compared with the rest of the country the Rhondda rate for 1908 is decidedly high, the average for the 76 great towns in 1908 being only 129 per 1,000 births, and the position of this district is the 75th on the list (Table 12). A high infantile mortality is usually found in industrial urban centres and is commonly associated with a high birth-rate, overcrowding of houses on space and of individuals in houses, and with the employment of married women in industrial occupations which necessitate a daily absence from home for long periods. With the exception of the first-mentioned, and, to a less extent of the overcrowding in individual houses, these influences operate but slightly in this district; the birth-rate, however, is higher than that of any other of the 76 great towns.

The question of how best to deal with the problem was again raised and fully discussed at the Health Committee towards the end of the year, on the consideration of a Special report submitted in consequence of the great mortality from diarrhoea in infants caused in the later summer months, and of all the means usually adopted in the reduction of infantile mortality, the possibilities presented by the service of health visitors most favourably impressed the Committee, and it was decided to advise the Council to appoint two health visitors and, before the end of the year, the Council adopted the recommendation. At the meeting of the Health Committee held on the 22nd of December, 1908, a recommendation was passed that the Council be advised to proceed to the adoption of the Notification of Births Act, 1907, with the

view of enabling the Council to secure earlier information concerning the occurrence of births throughout the district.

ZYMOTIC DISEASES.

		Average for the Ten Years.	
		1908.	1898—1907.
Total Number of deaths in Rhondda from Zymotic Diseases ...		535	402
* {	Zymotic Death-Rate for Rhondda ...	4·02	3·40
	„ „ „ „ ...	3·49	
	„ „ „ 76 Great Towns...	1·59	
	„ „ „ England & Wales	1·29	1·80

Under the term “ Zymotic Diseases ” are grouped the following :—Small-pox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Typhoid and other Continued Fevers, and Diarrhoea.

The Zymotic death-rate of 4·02 per 1,000 persons living, is the most unsatisfactory feature in the Rhondda Health records for the year 1908, and it exceeds the average of the ten previous years by '62. The figures here given however include, not only the deaths caused by Diarrhoea properly so called but also 71 deaths of children under one year of age attributed to Enteritis, Gastritis, or their respective synonyms (c.f. section dealing with Diarrhoea).

In comparison with the Zymotic death-rates of the 76 “ great towns ” the Rhondda rate comes last on the list, that is to say Rhondda has the highest Zymotic death-rate of the 76 great towns. (Table 13.)

The principal factor in the production of this high Zymotic death-rate was the excessive mortality from diarrhoea. Out of the 535 deaths grouped under this heading, diarrhoea was responsible for 319.

* See text for explanation.

The rate due to scarlet fever was under, while the rates caused by Measles, Diphtheria, Whooping Cough, Typhoid Fever and Diarrhoea were all above those for the corresponding diseases throughout England and Wales. (Table 15).

Ward 6 showed the highest zymotic death-rate, 5·9 per 1,000, and Ward 8 the lowest, 1·4 per 1,000 persons living. (Table 17.)

SMALL-POX.

No case of Small-pox occurred in this district during the year.

MEASLES.

			Average of Ten Years.
			1898—1907.
	1908.		
Number of deaths	102		54
Death-rate per 1,000 Rhondda ...	·77		·44
„ „ „ 76 Great Towns	·31		
„ „ „ England & Wales	·22		·33

Measles is a disease which in any particular district is apt to occur with exceptional epidemic prevalence every 2 or 3 years.

One attack of the disease practically renders the patient immune, so that after a season of exceptional prevalence of the disease, the majority of susceptible children have been attacked and few or no cases of measles occur for a year or two, till suitable soil appears for the measles infection in the shape of another generation of susceptible children.

Towards the end of 1907, measles appeared in epidemic form in Rhondda, and during 1908 was responsible for 102 deaths. This is equivalent to a death-rate of ·77 per 1,000.

This rate exceeds that of the 76 great towns by '46, and that of England and Wales by '55. It also exceeds the average rate for the previous ten years by '33 per 1,000 persons.

The greatest number of deaths occurred in January and in March with 24 and 25 deaths respectively. No death from measles was recorded during October, November and December.

During the month of January, the Infant's departments of the following schools were closed for the periods indicated owing to the measles epidemic.

Tylorstown School	from Dec. 24th, 1907 to Jan. 16th, 1908.
Pontygwaith	„ „ „ „
Aberllechau	„ Jan. 8th, 1908, to Jan. 17th, 1908.
Pentre	„ Jan. 22nd, 1908, to Feb. 1st, 1908.

As regards local incidence it will be seen on reference to Tables 16 and 17 that the most implicated Wards were Wards 2, 5 and 9, with the respective death-rates of 1'5, 1'6, and 1'3 per 1,000. In Ward 4, no death from measles was recorded throughout the year.

Statistics bearing upon measles will be found in Tables 14, 15, 16, 17, and IV. in the appendix.

SCARLET FEVER.

				Average for the Ten Years.	
				1908.	1898—1907.
Number of Cases	...	...	507		723
Number of Deaths	...	...	7		22
Death-rate per 1,000, Rhondda	...		'05		'18
„ „ „ 76 Great Towns			'10		
„ „ „ England & Wales			'08		'12

The number of cases notified during the year under review, showed an increase of 161 over the previous year's total, but is less by 216 than the average for the ten previous years.

The disease appears to have been of an even milder type as only 7 deaths took place out of the 507 cases, as compared with 9 deaths in 346 cases notified in 1907.

Scarlet Fever is a disease which varies very considerably in severity at different periods.

It is a disease which in its severest form is to be dreaded. The prevailing type has for many years been comparatively mild, but at any time in the future the type may become more virulent.

This type of disease seems during the year under review to have been milder than at any time since the adoption of the Notification Act in 1894.

The fatality rate in Rhondda for 1898 was 1·4 per cent which is the lowest rate recorded since the adoption of the Notification Act in 1894.

In proportion to the population of the district, the rate of incidence of the disease upon the inhabitants was 3·8 per 1,000, the rates for 1906 and 1907 being 2·8 and 2·7 respectively.

As regards the local distribution of the cases, 120 were notified in ward 2 and only 11 in ward 6, the numbers for the other wards ranging between those limits. (Table 19).

The ratio borne by the secondary cases to the total number of cases notified in the year 1908 was 21 per cent, as compared with 24, 24, 23, 25, 21, 23 and 26 per cent for the years 1901, 1902, 1903, 1904, 1905, 1906, and 1907 respectively. (Table 24.)

At the end of the year, there were 78 cases in 67 houses whereas at the corresponding time of the previous year there were 53 cases in 37 houses.

The systematic inspections and investigations carried out by the sanitary inspectors after each notification of infectious disease made apparent the fact that the houses infected by Scarlet Fever in the year 1908, contained, as in the case of all years since the institution of systematic records, a larger number of occupants than the houses of the district taken as a whole.

The average for 401 houses attacked amounted to 6·9 which is 1 person per house more than the census enumeration disclosed in the year 1901. (Table 25.)

The portions of the hospital extensions designed for the accommodation of scarlet fever patients were approaching completion towards the end of the year and it is expected that they will be available for use early in 1909.

Statistics bearing on this disease will be found in Tables 14 to 17, Tables 19 to 26, and Table III.

DIPHTHERIA.

				Average for the Ten Years.
				1898—1907.
			1908.	
Number of cases	...	...	185	673
Number of Deaths	...	...	32	81
Death-rate per 1,000 Rhondda	...	...	·24	·71
„ „ „	76	Great Towns	·16	
„ „ „		England & Wales	·15	·22

The prevalence of Diphtheria in the district was practically the same as in the previous year, 185 cases having been notified in 1908, and 177 in 1907.

These 185 cases gave rise to 32 deaths a mortality of '24 per 1,000 of the living population being thereby occasioned (Table 14 & 15).

This mortality-rate is greater than that of England and Wales as a whole, and greater than that of the 76 Great Towns. It compares very favourably, however, with the average mortality-rate for the last decennium in the Rhondda Urban District being only one-third of the latter.

I have to record a considerable increase in the fatality, or case-mortality of this disease in Rhondda during 1908. The fatality of the disease has varied very little since 1898, when antitoxine treatment began to have an effect on the records. The case-mortality in 1908 was 17'3 per cent, and is the highest recorded in the district since 1897 when it reached 31'5 per cent (Table 27).

There is a possibility that this increased fatality is due to a slightly increased virulence in the type of disease, but a comparison of the results in hospital-treated and home-treated cases, would lead one to expect that if a greater number of diphtheria cases were allowed to be removed to hospital, the general case-mortality would be considerably reduced. During 1908, 50 cases of diphtheria were treated in hospital and 2 died, the case-mortality being 4 per cent.

Diphtheria is a disease which to an exceptional extent requires constant skilled supervision over the patient, and such supervision, except in rare cases, can only be obtained in the Fever Hospital.

As regards the age incidence of the disease, 88 or nearly half the total number of persons infected were from 5 to 12 years old (Table 32). The maximum fatality occurred in the first and second years of life. All under two years of age who contracted Diphtheria in 1908 died from the disease,

the case mortality of this age period being 100 per cent. (Table 30).

The percentage of secondary to the total number of cases notified has diminished very much in the last ten years as shown in the following table :—

Year.	Total Cases.	Primary Cases.	Proportion of Secondary Cases to Total
1898	883	629	28·7 per cent.
1899	1804	1288	28·6 „
1900	1102	855	22·4 „
1901	1128	905	19·7 „
1902	757	624	16·2 „
1903	327	286	12·5 „
1904	214	196	8·4 „
1905	139	124	10·8 „
1906	194	181	6·7 „
1907	177	164	7·3 „
1908	185	175	5·4 „

The incidence of Diphtheria was highest in the month of July, which had a total of 22 notifications. During no month of the year were the notifications fewer than 13, so that the disease may be said to have been uniformly though not exceptionally prevalent in the district throughout the year (Table 29).

It is interesting to note on reference to Table 28, that July has been the month of greatest prevalence four times during the last 10 years.

As regards locality, Wards 9 and 10 with 45 and 35 cases respectively had the largest numbers of cases while Ward 1 had the cleanest record with only 4 (Table 31).

As in the case of Scarlet Fever, the houses infected by Diphtheria contained more occupants per house than the average for the whole district at the census enumeration in 1901, the averages being 6·6 and 5·9 respectively (Table 33).

For further statistics relating to diphtheria, reference may be made to Tables 14 to 17, Tables 27 to 33, and Table III.

TYPHOID FEVER.

			Average for the Ten Years.
			1898—1907.
	1908.		
Number of Cases	96		246
Number of Deaths	21		34
Death-rate per 1,000 Rhondda ...	'16		'29
„ „ 76 Great Towns	'08		
„ „ England & Wales	'07		'13

During the year 1908, there were notified 96 cases of Typhoid Fever which constitute the smallest number of cases notified in any year since the adoption in 1894 of the Infectious Disease (Notification) Act. (Table 34.) This number is equivalent to an incidence rate of '72 per 1,000 of the population, and is 150 below the annual average for the last decennium.

There occurred 21 deaths resulting in a mortality-rate of '16 per 1,000 of the living population, which is the second lowest rate from this disease for 30 years.

Nevertheless the typhoid fever record of the district still compares unfavourably with those of the 76 great towns and England and Wales as a whole, the respective mortality-rates being '16, '08, and '07 per 1,000 of the population.

Ward 1 contributed four deaths, wards 6 and 7 three each, Wards 2, 4, 5, 8 and 9 two each, Ward 10 one, while Ward 3 had no fatal case of this disease during the year (Table 16).

A large proportion of the total number of notified cases of typhoid fever was removed to hospital though not quite so large a proportion as in 1907; thus out of 96 cases notified, 70 or 73 per cent, were removed to hospital.

The proportion of secondary to primary cases was somewhat higher than usual. Out of the total of 96 cases, 24 or 25 per cent. were secondary. Many of these cases however were not secondary in the true sense, for there was evidence that a number attacked in the same house were infected about the same time.

The greatest number of notifications in any month were received in January, which contributed 23. These included a large group of 7 cases which occurred almost simultaneously in one house at Blaenrhondda. During the rest of the year the district enjoyed comparative freedom from typhoid fever.

As regards local incidence, Ward 1 with 23 notifications has the worst record. Wards 2, 3, 4 and 7, with totals of 5, 1, 4 and 3 notifications respectively were comparatively free from the disease (Table 34).

The average number of persons per house in the houses in which typhoid fever occurred was found to be larger by 1.0 than the average number of persons per house found in the census enumeration of 1901.

For further statistics see Tables 14 to 17, Tables 34 to 39, and Tables III. and IV.

WHOOPING COUGH.

			Average for the Ten Years.	
			1908.	1898-1907.
Number of Deaths	...	...	54	45
Death-rate per 1,000 Rhondda	...	...	41	38
„	„	76 Great Towns...	29	
„	„	England & Wales	27	29

Throughout the whole of 1908, Whooping Cough, as indicated by the deaths certified as having occurred therefrom, was more or less prevalent in the district. It claimed many more victims during the months of January, February, March, April and May, than during the rest of the year.

During the year there occurred 54 deaths which is equivalent to a mortality-rate of '41 per 1,000. The mortality-rates for the 76 great towns and for England and Wales respectively were '29 and '27.

It is impossible to accurately estimate the prevalence of Whooping Cough, as it is a non-notifiable disease, but with the above statistics before us we must regard the disease as having been rather more than usually prevalent in 1908.

The deaths were fairly evenly distributed throughout the district. The largest number, 14, took place in Ward 10, the next being Ward 5 with 9 deaths.

No Ward altogether escaped with a clean sheet as regards Whooping Cough, Wards 4 and 7, having had fewest deaths with 2 each.

No fewer than 34 out of the total of 54 were under one year of age. One was 5 years old, and the rest 3 or under.

DIARRHŒA.

				Average for Ten Years.
				1898—1907
				1908.
Number of Deaths ...				319
* {	Death-rate per 1,000 Rhondda ...		2'40	1'41
	" " " ...		1'86	
	" " 76 Great Towns		'65	
	" " England & Wales		'50	'70

As indicated in the above table the year 1908 proved an exceptionably unfavourable one as regards the number of deaths from diarrhœal diseases which occurred within the Rhondda for the total number recorded amounted to 319 deaths, equivalent to a rate of 2'40 per 1,000 of the living population. The two items in the above table which are

* See text for explanation.

bracketed together and denoted by an asterisk require the following explanation. The total number of 319 given above includes not only 248 cases certified as having died from diarrhoea and its many synonyms such as Epidemic Enteritis, Infective Enteritis, Summer Diarrhoea etc., but also 71 fatal cases of children under one year of age who were returned as having died from Enteritis or Gastritis or their respective synonyms; the first item referred to indicates the rate resulting from an inclusion of the cases belonging to all the categories mentioned, whereas the second item is the rate due to all cases of Diarrhoea properly so called. Inquiries which I have been able to make of certifying practitioners have led me to conclude that the majority of the deaths certified as due to Enteritis or Gastritis have really been caused by diseases indistinguishable from that causing, under the name of Diarrhoea, the deaths of a still larger number of children. Such a course in my opinion gives a truer indication of the extent to which such deaths may be preventible by measures designed to instil into the mothers of the district the great importance of avoiding such errors in the feeding and general management of their children as may be largely responsible for the high infantile death-rate in the district due to diarrhoeal diseases.

Owing however to the greater difficulty, in consequence of the adoption of this method, in making fair comparisons between the statistics of the district and those relating to other towns published by the Registrar General it would be well in future reports to adhere strictly to the arrangement obtaining in the Local Government Board tables which are included at the end of the appendix of this report and which are filled in according to the requirements of the Board.

In consequence of the great extent to which Diarrhoea prevailed during the late summer and early autumn of the year a special report was presented to the Health Committee

to enable them to review the influence which this more or less preventible mortality exercises upon the general death-rate as well as to consider the means which may be adopted for the purpose of at least reducing the potency of that influence. In that report I stated, "In this relation it will be advantageous, as well as convenient, to review the figures pertaining to diarrhœa only as part of the larger subject of infantile mortality, in that by far the greatest number of the deaths from diarrhœa occur among children under one year of age.

If the third quarter of the year, comprising the 14 weeks intervening between the 27th of June and the 4th of October, be taken as the period during which diarrhœa has had in the course of this year most influence upon the infantile mortality, an analysis of the figures shows that 198, or considerably more than half of the 350 deaths of children under one year of age which occurred during that portion of time, were attributed to diarrhœa. This total represents approximately one-eleventh of the total deaths for the whole of a normal year, and if the very considerable number of deaths from diarrhœa which occur among older children throughout the year, as well as among infants during other seasons also be included, it is obvious that the number of deaths from diarrhœa among children forms a very considerable item in our bills of mortality, both in an absolute sense and in relation to the remaining diseases which contribute to the infantile death-roll.

From the point of view of the sanitarian, special interest and importance attach to diarrhœa as a cause of death in the very young because of the possibility of preventing the vast majority of the deaths from this cause by the adoption of comparatively direct and easily applicable measures. It may be added that the successful application of the means directed against the causes of diarrhœa will as certainly,

though perhaps not as potently, favourably affect the influence which some, if not all, of the other most important causes exert upon the infantile mortality-rate.

It may be safely asserted that by far the most common cause of deaths from diarrhoea among infants is the want of proper care in the selection, preparation, and the administration of their food. This assertion is supported by the fact that a relatively small percentage of breast-fed infants succumb to this complaint.

As compared with other towns and with the country generally, Rhondda compares very unfavourably in respect of the infantile mortality as well as the mortality from diarrhoea. Thus in the year 1907, Rhondda possessed in the case of the former a rate of 162 per 1,000 births, and in the case of the latter a rate of 1·13 per 1,000, whereas the corresponding figures for England and Wales as a whole were 118 and ·29, and for the 76 large towns 127 and ·40 respectively.

If the period of comparison be extended from one to ten years, the figures pertaining to the Rhondda are equally unsatisfactory, as may be shown in tabular form:—

	Diarrhoea Mortality-rate.		Infantile Mortality-rate.	
	1907.	1897-1906.	1907.	1897-1906.
England & Wales ...	·29	·76	118	145
76 Large Towns ...	·40		127	
Rhondda	1·13	1·36	162	195

Until the year 1896 the death-rate from diarrhoea in the Rhondda was uniformly lower than that for the whole of England and Wales. Since 1895 the opposite has been the case, the difference being in some years very considerable.

Other factors doubtless lend considerable influence in this district to the causation of these high rates, such as the high marriage-rate, high birth-rate, early age at marriage

(29 per cent. of the married women in the Rhondda being under 21 years of age), and not improbably the number of refuse tips in the neighbourhood of dwelling-houses in several parts of the district.

The only measure adopted by the Council with the special object of reducing the death-rates from diarrhoea and some other of the causes contributing to the high infantile mortality in the district, has been the preparation and distribution of a series of instructions issued in card form. This method has been assiduously practised for six years within the Ystradyfodwg registration district. The exclusion of the remainder of the district from the sphere of operation of the scheme has made it possible to estimate the result of the distribution of the cards in the Ystradyfodwg area. Prior to 1902 no cards were issued, and the statistics for the two districts in 1901 are taken as the basis of comparison in subsequent years.

	Sub-District.	No. of Births.	No. of Deaths.	Death-rate per 1,000 Births.
1901	Ystradyfodwg ...	3,599	267	74
	Rest of District ...	987	57	58
1902	Ystradyfodwg ...	3,880	85	22
	Rest of District ...	1,057	23	22
1903	Ystradyfodwg ...	3,789	81	23
	Rest of District ...	1,108	21	19
1904	Ystradyfodwg ...	3,819	178	46
	Rest of District ...	1,041	33	31
1905	Ystradyfodwg ...	3,687	123	33
	Rest of District ...	977	49	50
1906	Ystradyfodwg ...	3,824	161	34
	Rest of District ...	927	29	31
1907	Ystradyfodwg ...	3,854	104	27
	Rest of District ...	981	19	19
1908	Ystradyfodwg ...	4,343	281	65
	Rest of District ...	1,111	38	34

NOTE :—No cards issued in 1901.

Cards distributed in Ystradyfodwg only in the years 1902-8 (7 years).

It will be seen by reference to the table that in only one year (1905), has the death-rate per 1,000 births from diarrhœa been lower in the portion of the district in which the cards are distributed than in the other portion.

On the other hand, with one exception (1908), all years subsequent to 1901 show relatively lower figures for Ystrad-yfodwg than for the remainder of the district, although in 1904 the difference between them and those of 1901, is very small.

If we may make the somewhat unsafe assumption that the year 1901 may be taken as typical of previous years, a review of the period of distribution of the cards justifies the opinion that this measure has had a beneficial influence. It may be safely added, however, that sufficient time has now elapsed since the initiation of the system to prove its inadequacy to meet the circumstances, and to show that some additional measures should be adopted with the view of obviating the preventible loss of life among infants, which is annually so conspicuous a feature in our sanitary history.

I need only enumerate the most important of the means which have met with varying success in other sanitary districts.

- (1) The appointment of lady doctors or health visitors.
- (2) The establishment of municipal milk depôts, whereat sterile and prepared milk may be bought.
- (3) The erection, maintenance, and management by the authority of a number of crèches or nurseries. This step is more especially applicable to districts where female labour is extensively employed."

The deaths from diarrhœa became numerous in the fourth week in July and progressively increased until the third and fourth weeks in August, during each of which 46 deaths occurred, the number of deaths rapidly diminished

until the fourth week in September when there was another but smaller rise which however does not seem to closely correspond with a similar rise in temperature (See Table 41).

As in the case of the six previous years diet cards were distributed to mothers in behalf of the Council by Mr. Geo. Williams, Registrar of Births and Deaths, within the Ystrad-yfodwg portion of the district. It is hoped however that the health visitors when appointed will be able to bring home to the mothers in a fuller, more acceptable and intelligible form the lessons and advice which the cards are meant to convey.

PUERPERAL FEVER.

				Average for the Ten Years.
				1908. 1898—1907.
Number of Cases	...	...	23	24
Number of Deaths	...	...	11	12
Death-rate per 1,000 Rhondda	...		'08	'10

There were notified throughout the year 23 cases of puerperal fever, which resulted in 11 deaths, equivalent to a death-rate of '08 per 1,000 of the living population.

When a comparison is made between the average death-rates of the last decennium, and the decennium immediately preceding it, it is satisfactory to find that the rate for the last decennium is less by '06 than that for the previous decennium, the respective figures being '10 and '16 (Table 44.)

If the whole period subsequent to April the 1st, 1903, when the Midwives Act, 1902, came into force, be considered in relation to the occurrence of cases of puerperal fever it is satisfactory to note that the annual average of cases notified since 1902 has been lower than that pertaining to a like

period immediately preceding 1903 to the extent that 21 is lower than 25 notwithstanding the fact that the average annual number of births during the latter, has exceeded that during the earlier period by 524.

Statistics regarding puerperal fever however suffer somewhat from the fact that the term is applied to various conditions occurring after child-birth. It has been defined by the Royal College of Physicians of London as including "septicæmia, pyæmia, septic peritonitis, septic metritis, and other acute septic inflammations in the pelvis, occurring as the direct result of child-birth."

As in the case of all the previous years since the administration of the Midwives Act, 1902, was begun, Dr. William Williams and his staff have carried out the necessary supervision on behalf of the Glamorgan County Council, which continues to be the supervising authority for the whole of the administrative county of Glamorgan.

The Rhondda Council however, through its Health Department still performs certain duties under the Act, more especially in connection with the disinfection of the clothing, instruments, and persons of midwives in attendance upon cases which have been declared to be suffering from puerperal fever.

PHTHISIS.

			Average for the Ten Years.
			1898-1907.
	1908.		
Number of Deaths ...	103		96
Death-rate per 1,000 Rhondda ...	'77		'81

There was a slight increase both in the total number of deaths from consumption in 1908, and in the death-rate per 1,000 of the population from this disease when compared with the previous year's figures.

The number of deaths from consumption amounted to 103 and gave rise to a mortality rate of '77 per 1,000 of the living population. Nevertheless this rate is '04 less than the average rate for the preceding decennium.

Table 45 showing the incidence of consumption terminating fatally is of great interest in virtue of the fact that in this district 69 per cent of all males above 10 years of age were found at the last census to have consisted of colliers.

Analysing the table we find that 36 persons working in collieries died from consumption as compared with 8 among the rest of the males above ten years of age. The proportion of deaths among colliers thus amounted to 82 per cent of the total of all males above ten years of age.

All the wards contribute to the total number of deaths from consumption. Wards 1, 4 and 7 had six each, wards 5 and 9 had ten each, ward 6 had eleven, wards 2 and 8 twelve each, and wards 3 and 10 fifteen each.

INFLUENZA.

	1908.
Number of Deaths	... 26
Death-rate per 1,000 Rhondda...	'20

There was again considerable prevalence of this disease during the year. The disease was most severe in type during the months of March, April and May.

The fatal cases resulting therefrom however were fewer than in the previous year, the totals being 26 and 29, and the resulting death-rates '20 and '22 respectively.

COLLIERY FATALITIES.

Number, 48—equivalent to a death-rate of '36 per 1,000.

No colliery disaster of great magnitude occurred in the district during the year, and the total number of deaths due to the minor accidents usually connected with collieries amounted to 48 resulting in a death-rate of '36 per 1,000.

The number of deaths and the rate are to some extent lower than the average figures due to this source in recent years. (Table 46.)

INQUESTS.

Total, 158—equivalent to a death-rate of 1'19 per 1,000.

If the accidents associated with the collieries be excluded, the number falls to 110, or '83 per 1,000. (Table 46).

THE TYNTYLA ISOLATION HOSPITAL.

Accommodation: New Hospital	...	32 beds.
Old Hospital	...	4 beds.
<hr/>		
Total	...	36

The portions of the hospital extensions designed for the treatment of scarlet fever cases were not available for that purpose at the end of the year, so that, as in the case of all years since 1902, only cases of diphtheria and typhoid fever were admitted.

The total number of patients received into and treated at the hospital during the year amounted to 120, whereas the number for the five preceding years were 222, 231, 87, 167, and 198 respectively.

The following table furnishes a summary of the number of cases, the number of deaths, and the fatality in respect of each of the two diseases treated at the institution during 1908.

	No. of Cases.	No. of Deaths.	Mortality per cent.
Diphtheria ...	*50	*2	4
Typhoid Fever ...	†70	†11	15·7
	120	13	10·8

*Including one case of broncho-pneumonia.

†Including one case of tuberculous empyema and one of meningitis.

It is interesting to consider the influence apparently exercised upon the fatality among the patients by the favourable character of the conditions and circumstances obtaining at the hospital by a comparison of the results with those relating to the unremoved cases, as shown in the following table:—

	Whole District.			Hospital Cases.			Rest of District (Hospital excluded)		
	Cases.	Deaths.	Mortality per cent.	Cases	Deaths.	Mortality per cent.	Cases.	Deaths.	Mortality per cent.
DIPHTHERIA (including Membranous Croup).	185	32	17·3	50	2	4·0	135	30	22·2
TYPHOID FEVER (including Continued Fever).	96	21	21·8	70	11	15·7	26	10	38·4
Totals ...	281	53	18·8	120	13	10·8	161	40	24·8

No case was admitted from ward 3, but all the other wards contributed to make up the total number removed to the Hospital.

		Diphtheria.	Typhoid Fever.
Ward 1 contributed	...	1	18
Ward 2 „	...	0	5
Ward 3 „	...	0	0
Ward 4 „	...	6	4
Ward 5 „	...	4	7
Ward 6 „	...	5	10
Ward 7 „	...	6	0
Ward 8 „	...	15	13
Ward 9 „	...	9	5
Ward 10 „	...	4	8
		<hr/>	<hr/>
Totals	...	50	70

The average time spent in the Hospital by recovered cases of diphtheria was 49 days (the extremes varying from 23 to 123 days) and of typhoid fever was 52 days (the extremes varying from 27 to 149 days).

In the case of those cases which terminated unfavourably the average numbers were 14 days and 32 days for the two diseases respectively, the extremes varying from 1 to 27 days in the case of diphtheria and from 2 to 128 days in the case of typhoid fever.

The total expenditure for the year amounted to £1,834 7s. 2d. apportioned as follows:—

Salaries and Wages	...	...	£681	5	4
Bread	...	...	37	10	3
Eggs	...	...	9	3	0
Fish and Vegetables	...	...	68	3	8
Milk	...	...	114	18	7
Meat	...	...	176	11	7
Groceries	...	...	152	15	10
Gas	...	...	102	18	0
Coal and Firewood	...	...	146	4	7

Water	...	...	...	£16	10	0
Gas and Water Repairs...			...	2	6	1
Stationery, Printing, Repairs, &c.	...		...	13	19	0
Stimulants, (Brandy &c.)			...	13	8	0
Horsefeed, Saddlery, &c.		...	...	12	9	1
Drugs, Instruments, &c.		...	...	126	7	7
Boiler Insurance	...		...	2	12	2
Fire Insurance	...		...	6	4	6
Soap, Brushes, &c.	...		...	26	16	11
Crockery, Drapery, &c.	...		...	25	13	6
Ironmongery	...		...	4	5	9
Advertisements	...		...	11	4	6
Methylated Spirit, Turpentine, &c.	...		...	8	0	3
Burial of Pauper Patient			...	2	15	0
District Rate	...		...	30	12	6
Poor Rate	...	...	...	29	3	4
Ambulance Repairs	...		...	5	17	6
Sundries	...	...	...	6	10	8
				<hr/> £1,834 7 2		

The interference with administration caused by the extensions in the form of two additional pavilions, and especially by the alterations to the administrative block, and laundry, continued throughout the greater part of the year to add to the difficulty in keeping the existing portions of the institution available to their full extent. On the 27th of October 1908, the Health Committee made a detailed inspection of the whole of the added portions consisting of

- (1) A new pavilion with accommodation for 16 beds.
- (2) Another new pavilion (with attached discharging block) with accommodation for 10 beds.
- (3) An additional storey to the administrative block.
- (4) An extension and remodelling of the laundry,

including the conversion where possible of the old hand appliances into steam-operated ones.

- (5) An extension of the stable block so as to provide an additional stall, an ambulance shed, a coal house, and a small storeroom.

Provision was also made for a small extension in rear of the laundry block for accommodating a pump to be used for supplying the Penrhys (small-pox) hospital with water derived from the Council's mains via the meter controlling the supply for the Tyntyla (or lower) isolation hospital.

Owing to the necessity to paint, repair, and generally renovate the old hospital (used as a laundry during the alterations and extensions), the old portion of the administrative block, the outbuildings, boundary wall, &c., it was found necessary to utilize the two new pavilions for the reception of patients suffering from diphtheria and typhoid fever so as to allow the pavilions hitherto used for the accommodation of those two diseases to be emptied. Tenders were therefore invited and that of Messrs. Gough Bros., Cardiff, in the sum of £437 17s. 7d. was accepted: the contract was signed on the 1st of January, 1909.

The extensions were satisfactorily carried out, to plans and specifications prepared by Mr. W. D. Morgan, Architect, Pentre, by Messrs. E. R. Evans & Bros., Cardiff, the laundry appliances being supplied by Messrs. T. Bradford & Co., and the heating apparatus by Messrs. Hampton & Co., Cardiff.

The duties of Clerk of Works for the Council were efficiently, tactfully, and firmly carried out by Mr. Evan Evans. The total cost of the extensions and alterations above outlined amounted to £9,645, including architects and other fees or salaries incidental to the erection. The

chief items in the total amount were the following :—

To Messrs. E. R. Evans & Bros., Builders,	£8,078	12s.	7d.
„ Bradford & Co., Laundry Fitters,	£390	14s	6d.
„ Hampton & Co., Heating Engineers,	£323	8s.	9d.
„ Rhondda Council Gas & Water Dept.	£261	11	8d.

The gas and water mains, fittings, &c., were supplied and laid or fixed by the Council's Gas & Water Department under the superintendence of Mr. Octavius Thomas, Gas and Water Manager to the Council.

The Matron, Miss R. E. Smith, rendered, as in the past, faithful services and her duties were to an unusual extent concerned with meeting the difficulties of accommodation arising from the necessity to vacate considerable portions of the administrative block, laundry, and other buildings to enable the builders to carry out the alterations and additions.

PENRHYS ISOLATION HOSPITAL.

(Small-Pox)

Owing to the total absence of small-pox from the district in the course of the year, there was no occasion to use the new hospital. In the course of the year work in connection with the institution, which for the most part had been already begun, was completed.

The whole site was surrounded with a specially strong unclimbable corrugated iron fence seven feet high, the remainder of the gas, water, and sanitary fittings were fixed, the water tower was completed and the heating apparatus was installed. The laundry appliances previously in use at the Tyntyla Isolation Hospital, which it was found

necessary to displace owing to the introduction of mechanical power, were utilized to the fullest extent possible and refixed at the Penrhys Hospital, so that practically no new laundry machinery had to be purchased.

The institution is situated at an elevation of 950 feet above sea level on the ridge between the two valleys and 350 yards from the main road connecting Ystrad in the Rhondda Fawr valley with Tylorstown on the Rhondda Fach side.

Although the hospital is thus very centrally situated, it is distant 400 yards or more from dwelling-houses, the nearest public institution being Llwynypia Union with about 120 inmates and at a distance of 450 yards.

The completed buildings consist of :—

- (1) An Administrative Block, consisting of a sitting-room, 5 bedrooms, kitchen, scullery, pantry, linen-room, bath-room, and the necessary sanitary appurtenances.
- (2) One pavilion with accommodation for 16 beds distributed in two wards of equal size.
- (3) A small pavilion with accommodation for 4 beds in two wards with two beds in each.
- (4) A Laundry Block comprising a laundry, disinfecting-tank room, mortuary, ambulance shed, and coal-house.

Structurally the buildings are of the “temporary” kind and are built of corrugated iron with “Stonwod” floors. Owing to the exposed character of the site special measures were taken to render the building secure against storms and for this purpose Mr. W. J. Jones, the Council’s Surveyor, stipulated for sheeting of 20 gauge, and that when in position, adjacent sheets should overlap each other to the extent of two corrugations.

The buildings are heated by a low-pressure steam system, the boiler therefor being placed underneath the water-tank tower.

Ventilation of the ward pavilions is secured by means of window ventilators and a number of "Tobin's" tubes.

The water supply of the institution presented some difficulty owing to the altitude of the site, both the Pontypridd Waterworks Company and the Council's Water Department being unable to supply by gravitation. The Council therefore were compelled to resort to pumping, the pump being fixed at the Tyntyla Isolation Hospital, and the water being stored in a tank placed on an iron framing thirty feet high from which the water is supplied by gravitation to the different portions of the hospital. The power for pumping is provided by the boiler in the disinfecting block of the former.

The institution is drained into the Council's sewerage system, a special sewer having had to be laid for the purpose between the hospital and one of the subsidiary sewers at Pontygwaith in the Rhondda Fach Valley.

A man and wife unencumbered by children were appointed by the Council as caretakers, but owing to damage caused to the administrative block by a violent storm their occupation of the building was considerably delayed.

The total cost of the hospital, excluding labour supplied by the Council, surface drainage and material used in laying the foundations for the buildings and concrete for the "Stonwod" flooring in the administrative block and the two ward pavilions, amounted to £3,316 8s. 1d., the items being as follow :—

Messrs. T. J. Hawkins, Builders, Westminster	£1,014	9	3
Messrs. Hampton & Co., Heating Engineers, Cardiff	...	...	...
Council's Gas and Water Dept. (mains, tank, tower, pump, fittings, etc.)	...	632	2 2
Messrs. J. Elwell & Co., Birmingham, for fencing	250	0	0
Sewerage...	...	238	13 0
Other Material and Haulage	...	233	2 2
Land (3 acres)	...	600	0 0
Compensation, Legal Expenses, etc.	...	38	16 0
		<hr/>	<hr/>
		£3,316	8 1
		<hr/>	<hr/>

SCAVENGING AND REFUSE DISPOSAL.

During the period under consideration two methods of refuse disposal have been practised, and there was no departure from the systems followed in the district during recent years. With the exception of about 16 tons, which are daily burnt at the destructor situated at Ystrad, the large amount of house refuse collected throughout the district is deposited at about 12 tips, distributed more or less conveniently within the limits of the urban district.

Practically all these tips are in more or less close proximity to the main roads of the district, and the majority of them within 50 yards of dwelling houses. The Council are annually becoming more appreciative of the fact that the existing conditions are unsatisfactory, and the Health Committee's time and attention during 1908 have very largely been given to a consideration of the respective merits of the two methods, on either or both of which it is recognised that the Council's choice must ultimately fall.

For the purpose of assisting the Committee in its consideration of the question, a sub-committee, accompanied by

the Surveyor and Medical Officer of Health, visited a number of places throughout the country at which several of the different forms of destructors were known to have been erected, and later in the year submitted a detailed report to the Health Committee on destructors on the one hand and conveyance (by means of ropeways) to the hill-tops on the other, with special reference to their applicability to the districts of Porth, Cymmer, Hafod and Ynyshir, at which land for ordinary dumping purposes has become unobtainable. After a full and exhaustive discussion, it was recommended that "having considered the alternative schemes for dealing with the refuse of the particular district mentioned above, and finding that the capital cost of an aerial ropeway would be one-third that of a destructor, and that the probable working cost would also be less in the case of the former, the Council endeavour to obtain land for this purpose, and appoint a Committee to negotiate for such land, and failing the acquisition of suitable land for a ropeway and tip, the alternative scheme for a destructor be adopted." At the following meeting of the Council the recommendation was adopted, and the Council resolved "that the Health Committee be empowered to negotiate for land for the deposit of refuse in accordance with the scheme referred to . . .". Since the date when that resolution was passed the negotiations have been proceeding, and in the meantime more information concerning the alternative schemes has been collected by inspection and inquiry and presented to the Committee. The later inquiries have tended to detract from the estimated advantage of the aerial ropeways over destructors in point of cost, and if it be found possible by arrangement with the Rhondda Tramway Co., or in some other way to make the destruction of the refuse by means of a destructor a source of revenue in virtue of the uses to which the heat resulting from the destruction can be put, the estimated difference in cost between the two schemes may be neutral-

ized, or so reduced as to render such advantage as the aerial ropeway may consequently possess a poor compensation for the loss of the more sanitary characteristics of a destructor. As mentioned in the August report of the Sub-Committee "the question of position and conformation of the site (of a tip) on the hill-top is of importance, because of the nuisance which a large collection of house-refuse must of necessity be if not far removed from dwelling-houses, or if the configuration of the site and its surroundings be such as to allow the lighter portions of the refuse to be blown about the neighbourhood. It should also be remembered that a site may be suitable for the deposit of refuse notwithstanding these considerations, and may yet lead to inconvenience and discomfort to a good many people who are in the habit of seeking fresh air and exercise on the hills." Moreover, large masses of decomposing house and other refuse will serve as breeding grounds for myriads of flies, and it is doubtless within the recollection of the Council that such pests did the flies derived from an adjacent refuse tip prove to be to a great number of people that, largely for that reason, the Council were obliged to abandon the use of that tip. Although the greater distance from dwelling houses at which it is intended to place the tips associated with ropeways will doubtless serve to reduce the extent of the invasion of the houses by flies, such distance cannot be made sufficiently great to altogether obviate the nuisance as well as positive danger which their presence as carriers of disease germs occasions.

The use of the two-cell Mason's destructor situated at Ystrad was continued throughout the year, its "destroying" capacity being as in former years not in excess of 16 tons a day.

The haulage of refuse to the several tips is still done by contract, the district being divided into 28 sections for that

purpose. The aggregate contract prices for the year 1908-1909 amount to £6,119, which sum by the acceptance of certain lower alternative tenders was reduced to £5,852 for the greater portion of the year. The lower price is equivalent to an expenditure of 4/10 per house, as compared with 6/-, 5/6, 4/-, 4/4, 4/6, and 6/10³/₄ per house for the years 1902-3 to 1907-8 respectively.

SEWERAGE.

Since the year 1892 when the main sewer, owned jointly by the Pontypridd and Rhondda Urban District Councils, was completed, the Rhondda Urban Council have been constantly engaged in completing the sewerage system of their district.

In 1894 one main sewer was laid for each of the two valleys, and since that time a sum of about £60,000 has been spent on subsidiary sewers throughout the district. The upkeep of the sewers already in existence involves a considerable annual expenditure as not infrequently great lengths of sewer have to be relaid in consequence of faults caused by subsidence from colliery operations, and the belief is gaining ground that the difficulties arising from this source as well as from the increase in size and number of the colliery rubbish tips can be most satisfactorily met by relaying sections of the main sewer along the course of the river at every opportunity offered.

Practically all new houses are connected with the sewerage system, new sewers being laid when the need arises, and the great majority of the houses existing at the time the two main subsidiary sewers were laid have now been connected.

The number of houses whose drains still remain unconnected to the sewer is being annually reduced, the total throughout the whole district coming within this category

now amounting to 468, or little more than one-tenth of the 4,290 houses which were unconnected to the sewer in 1897.

The following table shows the number of houses still unconnected in each sanitary inspector's district.

District No. 1 contains 115 unconnected houses.

„	„	2	„	51	„	„
„	„	3	„	71	„	„
„	„	4	„	87	„	„
„	„	5	„	72	„	„
„	„	6	„	72	„	„

The most important groups of unconnected houses consist of 50 houses known as Bush Houses in Clydach Vale, about 40 houses situated at Appletree, Dinas, and 51 houses at Caroline Street, Blaenrhondda. The houses constituting the first-mentioned group are provided with a slop-sewage drainage system discharging into Clydach Brook and were in 1907 supplied with pail closets in substitution for the previously existing and highly insanitary ash-middens. In the absence of a sewer no improved system is at present contemplated in connection with this isolated collection of houses.

The second group of unconnected houses mentioned is situated at too low a position in relation to the sewer and the difficulty can only be met by either the provision of a small pumping appliance or the installation of a small bacteria bed system at a suitable position between the houses and the river.

The houses in Caroline Street, Blaenrhondda, formed the subject of special attention in one of the reports presented to the Health Committee in the course of the year, and on the recommendation of that Committee the Council decided to lay the length of sewer necessary to make it possible for

the drainage system of this group to be connected to the main sewer, and a contract for the performance of the work was signed before the end of the year.

COMMON LODGING-HOUSES.

The number of registered common lodging-houses remained the same as in 1907—four in Ystrad and two in Dinas.

During the year they were visited regularly by Inspectors J. T. Thomas and D. W. Jones, in whose districts they are situated. Occasional surprise visits were paid at night, but with the exception of a tendency to overcrowding, the premises have generally been found satisfactory. Notwithstanding the increase in the number of houses registered within the last three years, there still appears to be a great need for well-designed and well-managed houses of this character in several parts of the district.

REPORTS DURING THE YEAR.

In addition to the ordinary statistical matter, the following subjects were dealt with in the reports placed before the Council during the year :—

Diarrhoea (4).

Drainage of Caroline Street, Blaenrhondda.

General Death-rate 1908.

Housing of the Working Classes Act, 1890 (2).

Influenza.

National Conference on Infantile Mortality 1908.

Notification of Births Act, 1907.

Outbreak of Measles at Pentre.

„ „ „ Pontygwaith.

„ „ „ Tylorstown.

„ „ „ Wattstown.

Recurring Nuisance at Ferndale.

Refuse Disposal.

Scarlet Fever.

School Closure due to Measles at Pentre.

„ „ „ „ Pontygwaith.

„ „ „ „ Tylorstown.

„ „ „ „ Wattstown.

The Public Health (Tuberculosis) Regulations 1908.

Water Supply of Blaenrhondda (including Fernhill and Caroline Street).

UN SOUND FOOD.

The following were destroyed during the year :—

Fish, 385-lbs.

Beef, 30-lbs.

ADOPTIVE ACTS.

The Infectious Disease (Notification) Act, 1889 ; The Infectious Disease (Prevention) Act, 1890 ; and the Public Health Acts (Amendment) Act, 1890 Part III, were adopted by the Rhondda Council from January 1st, 1894.

DISINFECTION.

As in the case of recent years as much as possible of the disinfection required in the district has been done by means of the "Equifex" Steam Disinfector which has been installed at the Isolation Hospital. When cases of infectious disease are removed to the hospital all the clothing believed to be infected is removed immediately afterwards for the purpose of such disinfection; when on the other hand the cases have to be treated at home, both room and clothing are disinfected at the end of the period of isolation, the clothing by means of the disinfector and the room by means of formaldehyde gas or sulphur dioxide or in some cases a combination of both.

WATER SUPPLY.

Broadly speaking, the sources of the water supplies of the respective bodies supplying the several parts of the district remained unaltered throughout the year, but the Pontypridd Waterworks Co., were authorized by the Pontypridd Waterworks and Tramroad Act, 1908, to obtain water from sources which they previously had no power to draw upon.

The district taken as a whole may be divided, in respect of its water supplies, into two main portions, the one consisting of the Rhondda Fawr Valley down to a line passing through wards 6 and 7 and supplied by the Rhondda Urban District Council and the other consisting of the remainder of Rhondda Fawr Valley together with the whole of Rhondda Fach Valley and supplied by the Pontypridd Waterworks Company. Within the limits of each of these broad divisions there are however relatively small areas deriving their water supplies from the other sources detailed below.

The Council's Water Supply is dependent in the main upon the surface and spring waters feeding the Selsig, Ffernol, and upper portion of the Rhondda Fawr stream, the water drawn from all of which suffices, under normal conditions, to fill and to keep full the Tynewydd reservoir, with a capacity of 7,000,000 gallons, which is situated at the upper end of the Rhondda Fawr Valley and which, as yet, constitutes the whole of the storage possessed by the Council. The new Llyn Fawr scheme is however in hand, 2,000 yards of the tunnel having already been bored and invitations for tenders for the construction of the reservoir (Llyn Fawr deepened and otherwise altered) were issued towards the end of the year. When completed,—probably in the course of the year 1911,—the scheme will provide an additional storage capacity of 167,000,000 gallons.

Notwithstanding the small available storage now possessed by the Council, Mr. Octavius Thomas, the Council's Gas and Water Manager, was able to provide a constant supply throughout the whole of the Council's area during the year. The distribution of the rainfall throughout the summer was favourable to the maintenance of a constant supply, for June was the only month in which the fall was low, and both the preceding and following months were relatively wet.

Two considerations in connection with their own water supply demand the early attention of the Council. In the first place it will be advisable before the completion of the Llyn Fawr scheme to adopt any means which may prove necessary for the purpose of safeguarding the consumers from any harm which may follow the use of the untreated Llyn Fawr water on account of the plumbo-solvent action which it has been found to possess. In the second place, the sand filtering area now at the service of the Council at their

works at Treherbert appears insufficient when considered in relation to the amount of water filtered and the nature of the present gathering ground.

Several groups of houses within the Council's water area are supplied from independent sources, the most important being the following :—

Blaenrhondda with over 100 houses which derive their supply from springs and a disused level.

Caroline Street with 51 houses, also supplied from some shallow springs and a disused level.

Fernhill with about 50 houses derives its supply from some levels on the eastern side of the valley.

Cwmparc with over 500 houses receives its water supply from a gathering ground over 300 acres in extent situated over a mile to the west of the village.

Fifty houses in Ystrad derive their water supply from a mountain stream, the water of which is not filtered before distribution.

About 300 houses situated in Llwynypia and belonging to the local Coal Company are supplied with water from a gathering ground lying immediately west of the houses. The water from this source is subjected to a course straining before distribution, but no efficient form of filtration is in operation.

Over 800 houses at the upper end of Clydach Vale are supplied by the Cambrian Coal Company. The nature of this supply has been from time to time reported to the Council, and still remains unsatisfactory, for contamination of the water can very easily occur at the source and the filtration to which the water is supposed to be subjected before distribution is inadequate to remove any contamina-

tion which the water may undergo. Moreover during dry seasons water is at times pumped direct into the mains without having been previously subjected to any form of filtration.

There are also small groups of houses in addition to those just given, amounting in the aggregate to about 190 which either separately or in small groups obtain their respective supplies of water for domestic purposes from springs, wells, or streams. The total area supplied by the Council amounts to 15,182 acres, distributed over which are not only the 11,417 houses supplied by the Council, but also the other groups already mentioned which are not so supplied. I am informed by Mr. Octavius Thomas that 343 new services were laid in the course of the year and that the consumption per head of the population at 5'92 persons per house amounted to 21'72 gallons for domestic purposes, an additional '62 gallon per head being used for trade purposes.

With the exceptions mentioned below, the remainder of the district is supplied with water by the Pontypridd Waterworks Company, their works being situated at the upper end of the Rhondda Fach Valley and two to three miles to the north of Maerdy. The exceptions amount in the aggregate to about 600 houses scattered throughout the Company's area of supply, the largest collections of houses being situated at Penrhiwfer, Trebanog, Hafod and Pontygwaith; the water in these instances is derived from a number of private sources.

Inquiries made from time to time in certain districts which had been in the past very inadequately supplied by the Company tended to the conclusion that there had been considerable improvement during 1908 as compared with recent years more especially in regard to the quantity supplied.

Any improvement in appearance recorded in certain localities was probably attributable to the diminished frequency with which the water was cut off and therefore to the lessened extent to which any deposit lining the interior of the mains and other pipes was disturbed and detached. There was no reason for believing that improved filtration was responsible for the more favourable reports which were sometimes received in the course of the year.

During the year four additional mechanical filters were erected within the Maerdy end of the corrugated iron shed in which the twelve candy mechanical filters are housed.

The new filters are known as Bell's and each is claimed to be capable of filtering 8,000 or 9,000 gallons per hour. The filtering medium is sand, which for cleaning purposes is periodically stirred up by means of mechanically-operated arms radiating from a central axis, filtered water from the other filters being used during the process of cleaning. During filtration the water after its passage through the sand gains entrance to the collecting pipes through perforated nozzles. In connection with the Bell's filter there is also set up a plant for hardening the water before filtration. At the end of the year the additional filtering plant and hardening appliance had not been taken over by the Company, so that no information is yet available as to their efficiency when under the Company's control.

In 1908 the Company obtained their Act known as the "Pontypridd Waterworks and Tramroad Act, 1908" authorising the Company to construct a reservoir in the Llia Valley in the county of Brecknock, with a capacity of not less than 600,000,000 gallons, and three service reservoirs, one situated in the lower end of Rhondda Fawr Valley within the Rhondda Urban District and the other two within the Pontypridd Urban District, together with the necessary

conduits and other works. Clause 12 of the Act contains provisions for the prevention of plumbism and for the “proper and efficient” filtration of the water “from the existing or any future works” of the Company. The hearing of the evidence bearing upon the Bill extended over nearly a fortnight, and such clauses as the Act contains for the protection of the consumers in a large measure owe their insertion in the Act in their present form to the weight and strenuousness of the opposition offered by the Glamorgan County Council and the Rhondda and Pontypridd Urban District Councils.

LEAD-POISONING ATTRIBUTABLE TO WATER SUPPLY.

In December, 1908, a letter relating to lead-poisoning in the district was received by the Council from the Local Government Board. A copy of the letter is appended.

Local Government Board,

Whitehall, S.W.,

2nd of December, 1908.

SIR,

I am directed by the Local Government Board to state that they desire to be furnished with information as to whether in the Council's district during recent years cases of lead-poisoning have been ascribable to the water supply and as to whether any action has been taken with a view to preventing plumbo-solvency of the water.

I am accordingly to request that the Council will instruct their Medical Officer of Health to furnish the Board either in his Annual Report for the current year or in a Special Report with information on the following points :—

(1) Have any cases of lead-poisoning, and if so how many, come to the knowledge of the Medical Officer of Health during recent years, either through death-returns or informal notifications by medical practitioners or by other channels?

(2) What action, if any, is taken by the Pontypridd Waterworks Company, or by the Council, with a view to preventing plumbo-solvency of the water?

(3) Is this method in constant and regular operation?

(4) What tests have been applied during the past year to determine (a) the acidity of the water supplied, (b) definite plumbo-solvency of the water?

I am, Sir,

Your obedient servant,

JOHN LITHIBY,

Assistant Secretary.

During the Parliamentary Session 1904-5, the Rhondda Urban District Council sought statutory powers to construct additional waterworks, which, if carried out, would involve the use of water from fresh gathering-grounds, some of which are to some extent peaty in character. On consideration of the Local Government Board's report upon the deposited Bill and upon some observations in the recent annual reports of the Council's Medical Officer of Health, relating to the peaty nature of some of the collecting areas throughout the district, it was thought advisable to make some specific inquiries as to the plumbo-solvency (if any) of the water which the Bill proposed to empower the Council to use, and as to the possible extent to which any properties possessed by the water distributed within the Council's area may have been productive of cases of lead-poisoning. Therefore, in March, 1905, samples of water were taken from the

supplies which had been scheduled in the Bill and from those portions of the existing gathering grounds, which in virtue of the arrangement outlined by the Bill, will probably be more drawn upon than in former years. To the former category belong samples 4 and 8, and to the latter 5, 6, 9 and 10 in the appended table. The two samples from Llyn-fawr showed plumbo-solvent properties to the extent of '10 and '04 parts per 100,000, and those from tributaries at the source of the Rhondda Fawr River showed a similar property to an extent varying from '04 to as much as '66 per 100,000. In actual practice however it is not intended to use any of these sources independently of each other and of other sources, and it is probable that the mixed waters will possess this dangerous characteristic to a much less extent. When however the existence of the danger was realized the Council readily permitted the introduction of the following clause for the protection of their consumers :—

“8.—All water supplied by the Council under this Act shall be properly and efficiently filtered or otherwise treated so as to prevent it acting on lead in such manner as to endanger the health of consumers and if the Council make default under this section they shall be liable to a penalty not exceeding ten pounds for every day during which such default shall continue.”

The attention of the Council has been drawn in my Annual Reports to the necessity to consider the best method to be adopted for the purpose of complying with the terms of this clause by the time their works now being constructed will be available for the purposes of water supply. Inasmuch as the water now being distributed by the Council to its consumers has almost invariably shown the absence of lead on analysis, although samples collected from consumers' taps are sent to the Glamorgan County Laboratory for analysis not less often than every quarter, it has not hitherto

been considered necessary to take special steps for the prevention of lead-poisoning. It should be added that throughout the whole of the Rhondda Urban District the consumers' service pipes are with rare exceptions, made of lead.

In March, 1905, there was sent to each medical practitioner in the district a series of queries which embodied the following questions :—

(1) Have you now any patients in your practice who are or who may be suffering from lead-poisoning ?

(2) Have you had at any time any patients so suffering ?

(3) If so can you give, approximately, the number of persons so suffering whom you have had under your care ?

(4) In the case of those, if any, whom you have treated or seen in consultation, did you form any opinion as to the probable source of the lead ?

Replies were received from 29 medical men and it was reported by each one of them that he had no case of plumbism under his observation at that time. A total of about 34 cases were stated as having been observed in the past and 26 of them were ascribed to lead ingested in the course of the sufferers' occupations more especially painting and, to a less extent, plumbing. In the first half of the year 1906 Dr. T. R. Llywelyn, Penygraig, most of whose practice lies within the area of distribution of the Pontypridd Waterworks Company, furnished the information that he had under his observation some cases of lead-poisoning. After investigation the suspicion previously entertained by Dr. Llywelyn that the water supplied to the consumers was the means of conveying the poison into the system, was confirmed. Eight samples of water (Nos. 16, 17, 20, 31, 32, 33, 34, and 35) were taken under the conditions detailed in the appended table and all contained lead or possessed

plumbo-solvent properties. In the light of this knowledge, another communication and a series of queries were sent to each medical man practising within the district; the queries were similar to those given already, and the letter ran as follows:—

“Dear Dr. . . . ,

Several severe cases of lead poisoning have recently occurred at Trealaw within the Rhondda Urban District, and up to the present all available evidence throws suspicion upon the water as the probable vehicle of the poison. As the water supply in the implicated district is not known to differ in any essential respect from that of a very much larger area, it is naturally a matter of interest and extreme importance as to whether other cases of lead poisoning (if any exist) can be attributed to the same source. I am therefore sending you a short series of questions with the hope that you will kindly forward to me your replies thereto as soon as you conveniently can.

Thanking you in anticipation,

I am, yours faithfully,

J. D. JENKINS,

Medical Officer of Health.”

Twenty-three replies were received, and in contrast to those returned in the previous year, information was furnished that a total of not fewer than 35 cases of lead-poisoning were at the time under treatment, and 19 of them were said by their medical attendants to be due to the plumbo-solvency of the water. Through the courtesy of their medical attendants I had the opportunity of examining some of those suffering; while one or two suffered from advanced paralysis and total incapacity, others exhibited some of the less severe but characteristic symptoms and signs of lead-poisoning. No death has yet been certified as due to this disease.

Circulars were at once prepared, submitted to the meeting of the Council in July, 1906, and distributed from house to house throughout those areas in which there was reason for believing that the water as supplied the consumers contained dissolved lead.

The circular was as follows :—

RHONDDA URBAN DISTRICT COUNCIL.
LEAD POISONING.

Several serious cases of lead-poisoning have lately occurred in this district. It is not improbable that water which has been allowed to stand in contact with lead pipes has been the means of introducing the poison into the system.

Everyone is therefore strongly urged to abstain from drinking water after it has stood in the lead service pipe, especially that first drawn in the morning.

In order to obtain water fit for drinking or cooking, it will probably be necessary to draw off at least a gallon, the exact amount depending on the length and bore of the service pipe.

By order of the Health Committee,

J. D. JENKINS,

Medical Officer of Health.

The distribution of the circulars evoked from the Pont-ypridd Waterworks Company (within whose area of supply all the cases known to me occurred) a remonstrance addressed to the Council on account of the waste of water which a due regard to the warning conveyed by them would occasion.

Much consideration was given by the Council to the seriousness of the position, but they were legally advised by Mr. W. P. Nicholas, their Clerk, that they (the Council) had no remedy under the then existing law. The Company however endeavoured as I was informed, to neutralize the acidity

of the water from their Lluestwen reservoir by the introduction of layers of chalk into their recently-erected Candy mechanical filters but only with partial success as shown by the results of the analyses of samples Nos. 28, 30, and 37 as compared with 27, 29, and 36 in the table. Further the results of the analysis of sample 41 derived from the outlet pipe from the Candy filters were actually more unfavourable than those relating to sample 40 which was the unfiltered water on its way to the Candy filters; in other words the water in its passage through Candy's filters acquired greater plumbo-solvent properties than it previously possessed. During the first seven months of 1908, I was not allowed by the Company to take any samples at their works except from their service tanks, power of access to which is given by their Act of 1892. Sample 44 was taken in March, 1908, and was found to be acid and to possess plumbo-solvent properties.

In 1907, the Council had taken action against the Company for failure to comply with their statutory obligations; the action was heard in the Chancery Division of the High Court before Mr. Justice Warrington. After the eighth day of the trial a settlement was arrived at by which the Company, among other pledges, undertook to properly filter the reservoir waters before the same enter the mains, and it was understood that some means should be adopted by the Company of depriving the water of its plumbo-solvency before its distribution.

The application of the Company in Session 1907-8 for an Act to confer further powers upon them gave the Council their opportunity and, acting in conjunction with other local authorities interested, sought and secured the insertion of clause 12 of that Act, which provides in subsection (1) that "All water supplied by the Company from their existing or any future works before the same shall be put into

their pipes for distribution shall be properly and efficiently filtered and shall be treated so as to render the same pure and wholesome for domestic purposes and so as to prevent it acting on lead in such a manner as to endanger or be liable to endanger the health of consumers." Sub-section (2) of the same clause provides that the works necessary for compliance with subsection (1) shall be constructed within six months of the date of the passing of the Act, which received the Royal Assent on 1st of August, 1908.

On August the 13th, 1908, the Company, doubtless in pursuance of the undertaking entered into at the end of the Action in the High Court at the end of 1907, were engaged in erecting four of Bell's mechanical filters, connected with which was being installed a mechanical arrangement said to be designed, by a continuous operation, for hardening the water as well as neutralizing its acidity.

As the Company were allowed by their Act of 1908 until the end of January, 1909, for the provision of the works mentioned in Clause 12 of that Act, no further action was taken by the Council before the end of 1908. On April 15th, 1909, I again visited the works, but was informed by one of the Company's attendants that the plant consisting of Bell's filters and of the hardening and neutralizing appliances was still in charge of the contractors, and had not at that date being taken over by the Company. At the time of writing, the Glamorgan County Council are promoting a Bill for the purpose of forming a Water Board, which it is proposed to arm with powers to acquire the Pontypridd Waterworks Company's various undertakings. Endeavours to ascertain from the Company the exact mode of operation of the Bell's hardening and neutralizing plant have been unsuccessful, but as soon as the fate of the Glamorgan Water Board Bill referred to is decided, inquiries and sample-

RHONDDA URBAN DISTRICT COUNCIL.

Table giving analytical and other details concerning certain samples of water which were examined for the presence of lead or for plumbo-solvent properties.

Date Collected	By whom Collected.	Source.	Water supplied or to be supplied by	Hardness	Reaction (to litmus)	Amount of Acidity (if present) in terms of c.c. of $\frac{N}{10}$ NaOH neutralized by 100 c.c. of the water.	Amount of Lead present in the sample when collected (parts in 100,000)	Plumbo-solvency (estimated by contact for 3 minutes with specially prepared lead shot) (parts in 100,000)	Where analysed.	
a	b	c	d	e	f	g	h	i	j	
1 March 24th, 1903	M.O.H.	Tap, Council Offices, Pentre	Rhondda Urban District Council				·016		Glamorgan County Laboratory	
2 April 9th, 1903	M.O.H.	Service Tank, Tydraw, Blaenewm	Private Supply				·06		Glamorgan County Laboratory	Priv
3 Sept. 7th, 1904	M.O.H.	Tap, No. 7 Station Street, Porth	Pontypridd Waterworks Co.		Faintly Acid		·016		"	
4 March 18th, 1905	M.O.H.	Llynfawr overflow	Council (authorised)	1·8°	Neutral	Nil	Nil	·10	"	Llynfawr is to c
5 " "	M.O.H.	Rhyd-y-cyllyll (Brook)	Council	1·5°	Acid	·2 c.c.	Nil	·66	"	reservoir
6 " "	M.O.H.	Gareg-lwyd Brook	Council	1·8°	Faintly Acid	·1 c.c.	Nil	·24	"	Peaty collecting sources of R
7 " "	M.O.H.	Tap, at 74 Ystrad Road, Pentre	Council	2·6°	Neutral	Practically Nil	Nil	·08	"	One of sources o
8 April 1st, 1905	M.O.H.	Llynfawr overflow	Council (authorised)	1·8°	Neutral		Nil	·04	"	Water derived from
9 " "	M.O.H.	Gareg-lwyd (middle stream)	Council	2·0°	Neutral		Nil	·04	"	
10 " "	M.O.H.	Gareg-lwyd (south-western stream)	Council	1·9°	Neutral		Nil	·04	"	
11 " "	M.O.H.	Nant-selsig inlet pipe (Ty'nywaun Reservoir)	Council	2·15°	Neutral		Nil	Traces only	"	
12 " "	M.O.H.	Nant-ffernol inlet pipe (Ty'nywaun Reservoir)	Council	2·7°	Faintly Alkaline		Nil	No appreciable trace	"	
13 " "	M.O.H.	Tap, 74 Ystrad Rd., Pentre	Council	2·65°	Faintly Alkaline			No appreciable trace	"	
14 " "	M.O.H.	Tap, Council Offices, Pentre	Council				·04		"	Water allowed to
15 April 18th, 1905	M.O.H.	Tap, Gas and Water Offices, Pentre	Council				·07		"	pipe for 16½ hou
16 June 9th, 1906	Inspector D. W. Jones	Tap at 27 New Century Houses, Trealew	Pontypridd Waterworks Co.				·46		"	Water allowed to s for 17 hours
17 " "	Inspector D. W. Jones	Tap at 240 Brithweunydd Road, Trealew	"				·52		"	Case of plumbi
18 July 10th, 1906	Inspector G. Reed	Tap, Post Office, Maerdy	"		Faintly Alkaline		Practially Nil		"	Case of plumbi
19 " "	Inspector L. T. Davies	Tap at 12 Edward Street, Porth	"		Neutral		·11		"	Water in contact w all night bef
20 " "	Inspector D. W. Jones	Tap at 88 Brithweunydd Road, Trealew	"		Faintly Acid		·21		"	"
21 " "	Inspector D. W. Jones	Tap at 11 Swan Terrace, Penygraig	"		Faintly Acid		·15		"	"
22 July 18th, 1906	Inspector L. T. Davies	Tap at 1 Hafod Road, Trehafod	"	1·9°	Faintly Acid		·17		"	"
23 " "	Inspector Reed	Tap at 4 Teify Terrace, Ferndale.	"	6·4°	Faintly Alkaline		Nil		"	"
24 " "	Inspector W. Williams	Tap at 44 Wyndham Street, Treherbert	Council	4·4°	Faintly Alkaline		Nil		"	"

RHONDDA URBAN DISTRICT COUNCIL.

Table giving analytical and other details concerning certain samples of water which were examined for the presence of lead or for plumbo-solvent properties.

Date Collected	By whom Collected.	Source.	Water supplied or to be supplied by	Hardness	Reaction (to litmus)	Amount of Acidity (if present) in terms of c.c. of $\frac{N}{10}$ NaOH neutralized by 100 c.c. of the water.	Amount of Lead present in the sample when collected (parts in 100,000)	Plumbo-solency (estimated by contact for 3 minutes with specially prepared lead shot (parts in 100,000))	Where analysed.	Remarks
a	b	c	d	e	f	g	h	i	j	k
25 July 18th, 1906	M.O.H.	Tap at Isolation Hospital, Ystrad	Council	4.2°	Faintly Alkaline		Nil		Glamorgan County Laboratory.	Water in contact all night before
26 " "	Inspector J. T. Thomas	Tap at 1 St. David St., Ton	"	4.2 ⁵	Faintly Alkaline		Nil		"	"
27 June 19th, 1907	M.O.H.	Unfiltered water from main from Lluestwen Reservoir	Pontypridd Waterworks Co.	.9°	Neutral		Nil	.38	"	Chalk said to be on t
28 " "	M.O.H.	Filtered water from Candy Filters	"	.9°	Neutral			.28	"	"
29 July 18th, 1907	M.O.H.	Unfiltered water from main from Lluestwen Reservoir	"	.75°	Acid			.26	"	"
30 " "	M.O.H.	Filtered water from Candy Filters	"	.75°	Very Faintly Acid			.20	"	"
31 July 23rd, 1907	Inspector D. W. Jones	Tap at 27 New Century Houses, Trealew	"		Neutral		.28		"	Water in serv before
32 " "	Inspector D. W. Jones	Tap at 240 Brithweunydd Road, Trealew	"		Neutral		.39		"	Water in serv before
33 " "	Inspector D. W. Jones	Tap at 27 New Century Houses, Trealew	"		Neutral		.03		"	Taken after water run
34 " "	Inspector D. W. Jones	Tap at 240 Brithweunydd Road, Trealew	"		Neutral		.086		"	"
35 August 1st, 1907	Inspector D. T. Williams (G.C.C.)	Street Hydrant on main near 47 Brithweunydd Road, Trealew	"		Neutral		.016	.26	"	
36 Sept. 17th, 1907	M.O.H.	Unfiltered water from main from Lluestwen Reservoir	"	.65°				.25	"	
37 " "	M.O.H.	Filtered water from Candy Filters	"	.7°				.13	"	Chalk said to be on t
38 Sept. 25th, 1907	M.O.H.	Tap at Tynycymmer Hall, Porth	"	.9°	Neutral		.30		"	
39 Sept. 26th, 1907	Inspector L. T. Davies	" "	"	.9°	Neutral		.54		"	Water in serv before
40 Nov. 14th, 1907	M.O.H.	Unfiltered water from main from Lluestwen Reservoir	"	1.25°	Faintly Alkaline			.04	"	
41 " "	M.O.H.	Filtered water from Candy Filters	"	1.05°	Neutral	.05 c.c. $\frac{N}{10}$ NaOH		.14	"	
42 " "	M.O.H.	Unfiltered water from inlet pipe to Reeve's Filters	"	5.3°	Faintly Alkaline			.02	"	
43 " "	M.O.H.	Filtered water from Reeve's Filters	"	5.5°	Faintly Alkaline			.02	"	
44 March 5th, 1908	M.O.H.	Filtered water from service tank fed by Candy Filters	"	.65°	Faintly Acid			.08	"	
45 " "	M.O.H.	Filtered water from service tank fed by Reeves Filters	"	4.8°	Alkaline			Less than .02	"	
46 " "	M.O.H.	Tap at Tynycymmer Hall, Porth	"	1.0°	Neutral		.24		"	After 9½ hours
47 " "	M.O.H.	Tap at Police Station, Porth	"	1.1°	Neutral		.028		"	"

taking will be renewed. Informal inquiries recently made, indicate that no fresh cases of lead-poisoning have come under the observation of the medical practitioners in those districts which have been most implicated.

To summarise, (1) Very few cases of lead-poisoning were known to exist throughout the Rhondda Urban District until early in the year 1906, and the large majority of those few were reasonably attributed to their occupations. The periodical samples of the waters taken from consumers' pipes in various parts of the district were almost without exception free from the presence of lead. (Confer appended table). (2) A crop of cases of lead-poisoning occurred, early in 1906, in certain localities which were limited to the area of supply of the Pontypridd Waterworks Company. Analyses of the samples of water taken from both the Council's and the Company's areas of supply showed that the water from the latter area possessed plumbo-solvency and acidity whereas those from the former were practically free from such properties. (3) Samples of water taken from certain portions of the gathering ground of the Council in 1905 on the other hand served to show that before their admixture with water drawn from the other sources of the Council they possessed both acid and plumbo-solvent qualities. (4) The gathering ground of the Pontypridd Waterworks Company is on the whole very much more peaty in character than that of the Council. (5) It is difficult to explain why the consumption of the water supplied by the Pontypridd Waterworks Company should have had such a harmful effect on the consumers in 1906, although it has been suggested that the circular of 1905 to the medical practitioners may have drawn particular attention to the question and thus served to lead to the discovery of cases of lead-poisoning not previously recognized as such. Some of the cases however were of so pronounced a type that the rela-

tion between the cause and effect could hardly have been overlooked. It may be worthy of notice in this connection however that it is a matter of common observation in this district that owing to the effect of the winning and working of coal the proportion of spring water available for the purposes of water supply in the district is progressively diminishing from year to year and the water supply is becoming more immediately dependent upon the rainfall and surface water with the probable result that the effect of the acid-neutralizing qualities of spring water exercises less influence on the character of the supply as a whole.

HOUSE ACCOMMODATION.

The number of houses passed for occupation in the course of the year 1908 was only slightly in excess of that pertaining to the previous year, the numbers being 829 and 827 respectively. The former total is more than sufficient to accommodate the estimated increase in population of 2,737 persons who, at the last census average of 5.92 persons per house, would require only 462 houses for their accommodation, so that, even assuming that the average per house ascertained to have existed in 1901 has been maintained, there was a balance of 367 houses available for the reduction of that average throughout the district. It will be seen on reference to the appended table that the rate at which the erection of houses throughout the district during the six most recent years has been maintained has been considerably in excess of the requirements of the estimated increase in population throughout the same period, with the net result that, if the district be taken as a whole, there has been a considerable reduction in the average number of persons occupying each house.

The distribution in point of locality of the newly-erected houses has however been uneven, as shown by the following table, giving the number of houses passed for occupation in each ward during 1908 :—

98 houses were passed for occupation in No. 1 Ward.

44	„	„	„	2	„
30	„	„	„	3	„
53	„	„	„	4	„
50	„	„	„	5	„
71	„	„	„	6	„
71	„	„	„	7	„
35	„	„	„	8	„
342	„	„	„	9	„
35	„	„	„	10	„
<hr/>				<hr/>	
829	„	„	„	Rhondda	

As in the case of recent years, Ward 10 with only 35 houses is one of those most ill-supplied, notwithstanding the fact that it is the most densely-populated ward in the district.

It appears however that the difficulty in obtaining land suitable for building purposes in that district has recently been overcome, and plans for a large number of houses on a site south of Maerdy have lately been submitted for the Council's approval. The need for houses in this district has of late been accentuated by the necessity to close, prior to reconstruction, 20 houses in Wood Street, Maerdy, which have become uninhabitable owing to some disturbance of the site. At the end of the year the reconstruction of 55 wooden huts at Blaenllechau in Ward 10 was almost completed by the Ferndale Colliery Company who own these houses and whom the reconstruction is said to have cost about £7000. The new dwellings consist of one-storey, four-roomed brick houses and are a great improvement upon the wooden huts which they replace.

The number of houses passed for occupation throughout the district in all years since 1897 is shown in the following table :—

In 1898 there were 317 houses passed for occupation.

„ 1899	„	157	„	„
„ 1900	„	148	„	„
„ 1901	„	187	„	„
„ 1902	„	334	„	„
„ 1903	„	483	„	„
„ 1904	„	594	„	„
„ 1905	„	904	„	„
„ 1906	„	879	„	„
„ 1907	„	827	„	„
„ 1908	„	829	„	„

During the year 1908 plans for 1,134 dwelling-houses, 13 shops, and 7 chapels and churches were submitted and approved.

ADMINISTRATION.

Towards the end of the year an important addition was made to the duties devolving upon those responsible for the performance of the work in connection with the Health Department of the Council, in consequence of the decision of the Local Education Authority to appoint the Medical Officer of Health their School Medical Officer to carry out the provisions of Section 13 of the Education (Administrative Provisions) Act, 1907. Some delay was occasioned by the failure to decide without prolonged consideration as to the form and extent which the assistance consequently necessary should take. One male medical inspector of school children was appointed on the 9th of October, but before taking up his duties, though sometime after the date mentioned, he asked the Education Authority

for permission to relinquish the appointment, and it was not possible to make another appointment before the end of the year. The staff of inspectors remained unaltered throughout the year and it is hoped that in order to realize the extent of the need for assistance in this department which exists, it is sufficient to mention that each inspector's district contains over 4,000 houses with an estimated average population of over 22,000 persons, and that, in the absence of inspectors appointed to perform special work, all the multifarious duties devolving upon an inspector of nuisances have to be performed by each of your six inspectors throughout his district.

Owing to the transference of Mr. Evan Evans from the Health to the Surveyor's department, Mr. T. J. Rees was appointed Junior Clerk in the former, Mr. E. R. Jenkins remaining as Senior Clerk.

SHOP HOURS ACT, 1904.

In the course of the year 1905, an Order relating to Barbers' Shops throughout the district was made under the provisions of this Act.

The Order provides that these premises shall be closed on

Monday and Tuesday	...	...	at 8 p.m.
Wednesday and Friday	...	...	at 9 p.m.
Thursday	...	...	at 1.30 p.m.
Saturday	...	...	at 11.30 p.m.

At the end of 1907, an application for a Closing Order from the drapers, outfitters, tailors, ironmongers, and boot and shoe dealers in Wards 5, 6, 7, and the portion of Ward 8 known as Appletree was received, and during the first part of 1908, the Council took the necessary steps in accordance

with the Regulations made by the Home Secretary in pursuance of Section 7 of this Act, and in July the Closing Order was duly made.

This Order provides that the shops shall be closed as follows :—Drapers, Outfitters, Tailors, and Boot and Shoe Shops :—

Monday	...	...	...	from 8 p.m.
Tuesday and Wednesday	...	...	...	from 7 p.m.
Thursday	...	...	...	from 1 p.m.
Friday	...	...	...	from 7.30 p.m.
Saturday	...	...	...	from 11 p.m.

Ironmongers' Shops :—

Monday, Tuesday, Wednesday & Friday from 8 p.m.				
Thursday	...	...	...	from 1 p.m.
Saturday	...	...	...	from 11 p.m.

Provided that on any day (other than Sunday) preceding Christmas Day, Good Friday, a Bank Holiday, or a day appointed by Royal Proclamation as a day of General Fast, Humiliation, or Thanksgiving the hour for closing shall be 11 p.m.

EMPLOYMENT OF CHILDREN ACT 1903.

Bye-laws in pursuance of the provisions of this Act received the sanction of the Home Secretary in 1907. The Act has been since administered by the Police Authorities of the County of Glamorgan, all necessary prosecutions being instituted and conducted by the Clerk to the Council.

FACTORY AND WORKSHOP ACT 1901.

Although the large number of 1,178 workshops exist throughout the Rhondda Urban District Council, the nature of the occupations followed is not such as to make the administration of the Factory and Workshop Act, 1901,

in this district of the supreme importance attached to it in many industrial communities, for the Rhondda is a one-industry district, and the interests of those engaged in the winning and working of coal are safeguarded by the Coal Mines Regulations Acts, which provide for the appointment of special inspectors. The aggregate number of persons employed in the various workshops throughout the district is however sufficiently large to justify more attention than the insufficient staff of inspectors now possessed by the Council enable the Health Department to devote to the welfare of those employed. At present all known newly-established workshops and workplaces are inspected and the facts so ascertained are recorded. Revisits are paid as circumstances require, but periodical and systematic inspections of all workshops throughout the district is not practicable with the present staff if other and more urgent work is to receive due attention. The appended table gives the number of workshops and workplaces throughout the district arranged in their respective classes and in the wards in which they are situated.

The total number amounts to 1,178, and is an increase of 64 as compared with that on the register in the previous year.

Workshops and Workplaces in the Rhondda in Wards.

	1	2	3	4	5	6	7	8	9	10	Total
Bootmakers ...	15	12	16	14	13	23	13	16	14	15	151
Bakers ...	16	16	17	14	16	12	16	20	17	20	164
Blacksmiths ...	1	1	3	1	2	2	3	3	3	2	21
Barbers ...	11	12	11	11	11	16	11	14	14	12	123
Basket makers ...	—	—	—	—	—	1	—	—	—	—	1
Carpenters ...	5	4	7	10	7	8	7	8	8	12	76
Fried Fish Shops ...	9	7	10	6	6	7	8	9	8	5	75
Coachmakers ...	1	1	3	—	1	2	2	3	1	1	15
Cycle Repairers ...	1	1	1	1	1	1	—	—	—	—	6
Dressmakers ...	30	28	17	13	12	16	4	21	19	42	202
Dressmakers and Milliners (comb.)...	1	1	—	—	—	1	—	2	—	3	8
Glaziers ...	—	3	2	2	—	2	—	1	2	—	12
Jewellers ...	2	4	5	2	—	2	2	4	4	5	30
Milliners ...	7	11	10	8	5	6	6	8	7	10	78
Knitters ...	—	—	—	—	1	—	—	—	—	—	1
Picture Framers ...	2	5	4	3	1	—	—	1	—	—	16
Printers ...	1	1	1	—	—	—	—	2	—	1	6
Plumbers ...	3	5	3	2	2	—	1	2	2	1	21
Saddlers ...	2	1	1	1	—	1	2	2	—	3	13
Monumental Masons ...	—	3	—	—	—	4	—	1	1	2	11
Sweet Makers ...	1	—	3	1	—	—	—	—	—	—	5
Tailors ...	8	13	12	9	6	6	4	7	5	6	76
Tinmen ...	—	—	1	—	1	1	1	1	—	1	6
Quarries ...	1	6	6	5	7	5	6	7	12	6	61
 RHONDDA ...	 117	 135	 133	 103	 92	 116	 86	 132	 117	 147	 1178

MEDICAL INSPECTION OF CHILDREN IN ELEMENTARY SCHOOLS.

The Education Authority for the Rhondda decided after due consideration of the Education (Administrative Provisions) Act, 1907, and of the several circulars bearing thereupon issued by the Board of Education, to appoint the Medical Officer of Health for the district as School Medical Officer to organize, superintend, and supervise, the medical inspection of the children attending their elementary schools.

A male medical inspector was appointed on the 9th of October, but as the date in which he was to commence his duties was approaching he sent in his resignation, which was accepted on the 4th of December, and an advertisement relating to the vacancy so caused was immediately issued, but it was not possible to appoint another medical inspector until after the termination of the year. Consequently the medical examination of school children in pursuance of Section 13 of the Education (Administrative Provisions) Act, 1907, was not commenced until 1909. The Council's scheme provides for the appointment of a school medical inspector to devote his whole time to the work on the days on which the schools are open as well as of an Assistant Medical Officer of Health, whom it is intended to employ in the medical inspection of school children when his services may not be needed for the performance of some of the duties pertaining to the Health Department.

The number of children on the registers of the Council's schools on January 1st, 1909, amounted to 30,244, who are taught in 40 schools, sub-divided into 91 departments, and it is estimated that in order to comply with the Board of Education's requirements, 5,349 children should be medically examined before July 31st, 1909, but such an achievement will be impracticable owing to the delay at the commencement caused as above indicated.

APPENDIX.

Table 1.

Population of the Rhondda Valleys since 1801.

Year.	Houses.			Persons.			Persons per house.
	In-habited.	Unin-habit ed.	Build-ing.	Males.	Females.	Total.	
<i>a</i> 1801				265	277	542	
1811				283	293	576	
1821				309	338	647	
1831				277	265	542	
1841				386	362	748	
1851				493	458	951	
1861	561	107	5	1,669	1,366	3,035	5·4
1871	2,710	32	62	9,559	7,355	16,914	6·2
<i>b</i> 1871						23,950	
1881	9,193	340	158	30,877	24,755	55,632	6·0
1891	13,551	146	374	50,174	38,177	88,351	6·5
1901	19,210	868	112	62,315	51,420	113,735	5·92
Mids'm							
1908	23,786					135,580	5·7

NOTES.

(a) The census returns for 1801 include Rhigos, which is not within the present area of the Rhondda District.

(b) Portions of the Llanwonno and Llantrisant Districts were added to the Rhondda District on October 1st, 1879.

The Registrar General estimated the population in the enlarged area in 1871 at 23,950.

Table 2.

Rateable Value as stated in Poor Rate.

I am indebted to Mr. Evan Llewellyn for the following statement :—

Year ending March.				General District Rate in the £.		
£				s. d.		
1889	...	...	350,500	...	1	6
1890	...	...	359,367	...	1	6
1891	...	...	388,879	...	1	3
1892	...	...	397,814	...	1	6
1893	...	...	403,106	...	1	6
1894	...	...	389,524	...	2	3
1895	...	...	382,429	...	2	9
1896	...	...	409,807	...	2	6
1897	...	...	443,290	...	2	6
1898	...	...	451,977	...	2	6
1899	...	...	462,354	...	2	6
1900	...	...	463,387	...	2	9
1901	...	...	490,352	...	2	9
1902	...	...	535,255	...	3	0
1903	...	...	539,336	...	3	0
1904	...	...	515,731	...	3	8
1905	...	...	527,210	...	3	0
1906	...	...	520,041	...	3	0
1907	...	...	550,019	...	3	0
1908	...	...	569,169	...	3	3
1909	...	...	622,833	...	3	6

The assessable value for the half-year ending March, 1909, is £540,430.

An analysis of the different rateable values shews that 88 per cent. of the houses in the district are rated under £10 per annum, and that 95 per cent are rated under £20 per annum.

A penny rate produces £2,251 15s. 10d.

Table 3.

Showing the actual number of Births in the Rhondda, and the Birth-rates during the years 1888-1908.

Year.		Total Births.		Birth-rate per 1,000	Average of Ten Years.
1888	...	2,975	...	38·2	41·2
1889	...	3,140	...	38·5	
1890	...	3,425	...	40·1	
1891	...	3,935	...	44·0	
1892	...	3,916	...	42·9	
1893	...	4,149	...	44·3	
1894	...	3,715	...	38·7	
1895	...	4,245	...	43·1	
1896	...	4,328	...	42·9	
1897	...	4,109	...	39·7	
1898	...	4,120	...	38·8	39·1
1899	...	4,089	...	37·5	
1900	...	4,469	...	40·0	
1901	...	4,586	...	40·0	
1902	...	4,937	...	42·2	
1903	...	4,897	...	40·9	
1904	...	4,860	...	39·7	
1905	...	4,664	...	37·3	
1906	...	4,751	...	37·2	
1907	...	4,831	...	37·0	
1908	...	5,454	...	41·0	

Table 4.

Comparative Birth-rate Table for 1908.

				Birth-rate 1,000
England and Wales	...	...	...	26·5
Rural England and Wales	...	...	...	26·2
76 Great Towns ...	...	...	...	27·0
142 Smaller Towns	...	...	...	26·0
Rhondda	...	...	...	41·0

Table 5.

The number of houses, estimated population, number of births, and birth-rate per 1,000 for each Ward.

Ward		Number of occupied houses.		Estimated population to middle of 1908.		Number of Births.	Birth-rate per 1,000
1	...	1,971	...	11,033	...	488	44·2
2	...	2,380	...	13,322	...	567	42·6
3	...	2,006	...	11,228	...	420	37·4
4	...	1,820	...	10,187	...	457	44·9
5	...	2,402	...	13,444	...	614	45·7
6	...	2,190	...	12,258	...	577	47·1
7	...	1,921	...	10,753	...	430	40·0
8	...	3,150	...	17,632	...	583	33·1
9	...	3,137	...	17,559	...	685	39·0
10	...	2,809	...	15,721	...	633	40·3
Rhondda		23,786	...	133,137	...	5,454	41·0

Table 6.

Showing the number of Illegitimate Births in the Rhondda.

In 1895 there was a number equivalent to 26 per 1,000 of total births

„ 1896 „ „ „ 24 „ „

„ 1897 „ „ „ 23 „ „

„ 1898 there were 105, equal to 25 per 1,000 of total births

„ 1899 „ 75 „ 18 „ „

„ 1900 „ 111 „ 24 „ „

„ 1901 „ 97 „ 21 „ „

„ 1902 „ 97 „ 15 „ „

„ 1903 „ 115 „ 23 „ „

„ 1904 „ 100 „ 20 „ „

„ 1905 „ 100 „ 21 „ „

„ 1906 „ 101 „ 21 „ „

„ 1907 „ 107 „ 22 „ „

1908 „ 119 „ 22 „ „

Table 7.

Number of Births, Birth-rate, number of Deaths, and Death-rate in each year since 1881.

Year.		Number of Births.		Birth-rate per 1,000.		Number of Deaths.		Death-rate per 1,000.
1881	...	2,556	...	45·4	...	1,376	...	24·4
1882	...	2,682	...	45·5	...	1,260	...	21·4
1883	...	2,743	...	44·4	...	1,339	...	21·7
1884	...	2,924	...	45·2	...	1,555	...	24·0
1885	...	3,089	...	45·6	...	1,423	...	21·0
1886	...	3,003	...	42·3	...	1,821	...	25·7
1887	...	2,910	...	39·2	...	1,464	...	19·7
1888	...	2,975	...	38·2	...	1,440	...	18·5
1889	...	3,140	...	35·5	...	1,645	...	20·2
1890	...	3,425	...	40·1	...	1,756	...	20·6
1891	...	3,935	...	44·3	...	2,255	...	25·4
1892	...	3,916	...	42·9	...	1,804	...	19·8
1893	...	4,149	...	44·3	...	2,132	...	22·8
1894	...	3,715	...	38·7	...	1,706	...	17·7
1895	...	4,245	...	43·1	...	2,246	...	22·8
1896	...	4,328	...	42·9	...	2,105	...	20·8
1897	...	4,109	...	39·7	...	2,049	...	20·1
1898	...	4,120	...	38·8	...	1,979	...	18·8
1899	...	4,089	...	37·5	...	2,419	...	22·4
1900	...	4,469	...	40·0	...	2,181	...	19·9
1901	...	4,586	...	40·0	...	2,431	...	21·6
1902	...	4,937	...	42·2	...	2,190	...	19·2
1903	...	4,897	...	40·9	...	1,998	...	16·7
1904	...	4,860	...	39·7	...	2,345	...	19·1
1905	...	4,664	...	37·3	...	2,402	...	19·2
1906	...	4,751	...	37·2	...	2,074	...	16·2
1907	...	4,831	...	37·0	...	2,133	...	16·4
1908	...	5,454	...	41·0	...	2,516	...	18·9

Table 8.

Showing the number of houses, estimated population, number of deaths, and death-rate per 1,000 for each Ward.

Ward.		Number of occupied houses.		Estimated population to middle of 1908.		Number of Deaths from all causes.		Death-rate per 1,000.
1	...	1,971	...	11,033	...	241	...	21·8
2	...	2,380	...	13,322	...	266	...	20·0
3	...	2,006	...	11,228	...	183	...	16·3
4	...	1,820	...	10,187	...	189	...	18·6
5	...	2,402	...	13,444	...	263	...	19·6
6	...	2,190	...	12,258	...	255	...	20·8
7	...	1,921	...	10,753	...	191	...	17·8
8	...	3,150	...	17,632	...	264	...	15·0
9	...	3,137	...	17,559	...	342	...	19·5
10	...	2,809	...	15,721	...	322	...	20·5
Rhondda		23,786	...	133,137	...	2,516	...	18·9

Table 9.

Death-rates in the 76 Great Towns of England and Wales, for 1908, based upon the estimated population at Midsummer as given by the Registrar-General.

Town.	Death-rate.	Town	Death-rate.
1 Hornsey ...	... 8·3	39 Great Yarmouth ...	... 15·1
2 East Ham ...	... 10·4	40 Nottingham ...	... 15·2
3 Leyton ...	... 10·4	41 Leeds ...	... 15·3
4 Kings Norton...	... 10·5	42 Coventry ...	... 15·4
5 Walthamstown ...	... 10·5	43 Bolton ...	... 15·5
6 Willesden ...	... 10·5	44 South Shields ...	... 15·5
7 Handsworth (Staffs).	... 10·7	45 Bradford ...	... 15·6
8 Northampton...	... 11·6	46 Blackburn ...	... 15·7
9 Hastings ...	... 11·7	47 St. Helens ...	... 15·7
10 Reading ...	... 11·8	48 Birkenhead ...	... 15·8
11 West Hartlepool ...	... 12·0	49 Bury ...	... 15·8
12 Aston Manor ...	... 12·5	50 Sheffield ...	... 15·8
13 Tottenham ...	... 12·5	51 Birmingham ...	... 15·9
14 York ...	... 12·6	52 Newcastle-on-Tyne ...	... 16·0
15 Burton-on-Trent ...	... 12·8	53 Rotherham ...	... 16·0
16 Croydon ...	... 12·8	54 West Bromwich ...	... 16·0
17 Bournemouth ...	... 12·9	55 Hull ...	... 16·2
18 Leicester ...	... 12·9	56 Newport (Mon) ...	... 16·2
19 Southampton...	... 12·9	57 Huddersfield...	... 17·0
20 Cardiff ...	... 13·0	58 Warrington ...	... 17·1
21 Barrow-in-Furness ...	... 13·1	59 Tynemouth ...	... 17·5
22 Derby ...	... 13·1	60 Sunderland ...	... 17·7
23 Devonport ...	... 13·3	61 Salford ...	... 17·8
24 Smethwick ...	... 13·4	62 Burnley ...	... 17·9
25 Bristol ...	... 13·6	63 Preston ...	... 18·0
26 Wallasey ...	... 13·6	64 Stockton-on-Tees ...	... 18·0
27 London ...	... 13·8	65 Wigan ...	... 18·0
28 Portsmouth ...	... 13·8	66 Manchester ...	... 18·2
29 West Ham ...	... 13·9	67 Stockport ...	... 18·2
30 Halifax ...	... 14·1	68 Bootle ...	... 18·3
31 Norwich ...	... 14·1	69 Rochdale ...	... 18·4
32 Ipswich ...	... 14·3	70 Hanley ...	... 18·5
33 Wolverhampton ...	... 14·3	71 Swansea ...	... 18·6
34 Grimsby ...	... 14·4	72 Rhondda ...	... 18·9
35 Brighton ...	... 14·8	73 Liverpool ...	... 19·2
36 Walsall ...	... 14·9	74 Merthyr Tydfil ...	... 19·2
37 Gateshead ...	... 15·0	75 Middlesbrough ...	... 19·7
38 Plymouth ...	... 15·0	76 Oldham ...	... 19·8

Table 10.

Rates of Mortality in the Rhondda of Children under one year of age from the principal infantile diseases per 1,000 births during 1899-1908.

Cause of Death.	1899		1900		1901		1902		1903		1904		1905		1906		1907		1908	
	Total Deaths.	Rate per 1,000 Births.	Total Deaths.	Rate per 1,000 Births.	Total Deaths.	Rate per 1,000 Births.	Total Deaths.	Rate per 1,000 Births.	Total Deaths.	Rate per 1,000 Births.	Total Deaths.	Rate per 1,000 Births.	Total Deaths.	Rate per 1,000 Births.	Total Deaths.	Rate per 1,000 Births.	Total Deaths.	Rate per 1,000 Births.	Total Deaths.	Rate per 1,000 Births.
All Causes	1016	248	839	186	1020	222	883	178	778	158	925	190	927	199	828	174	782	162	1002	184
Diarrhoea	326	80	140	23	267	58	52	10	88	17	173	35	148	31	161	34	123	25	271	50
Debility	181	44	71	15	138	30	153	30	107	21	146	30	148	31	147	31	131	27	116	21
Convulsions	152	37	165	36	188	41	171	34	130	26	123	25	143	30	82	17	109	23	113	21
Lung Diseases (except Tubercular)	152	37	121	27	134	29	192	38	134	27	150	30	197	42	153	32	177	37	177	32
Premature Birth	56	13	66	14	74	16	53	10	84	17	69	14	62	13	69	15	68	14	88	16
Dentition	38	9	28	6	30	6	34	6	35	7	23	4	23	5	8	2	8	2	9	2
Whooping Cough	37	9	29	6	18	3	21	4	27	5	25	5	22	5	13	3	19	4	34	6
Tubercular Diseases...	21	5	24	5	9	1	20	4	12	2	18	3	27	6	17	4	12	3	15	3
Measles	—	—	43	9	2	.2	38	7	2	.4	32	6	24	5	8	2	21	5	28	5

Table 11.

Deaths under one year of age in the different Wards during 1908 from the following diseases:—

Cause of Death.	Ward 1.	Ward 2.	Ward 3.	Ward 4.	Ward 5.	Ward 6.	Ward 7.	Ward 8.	Ward 9.	Ward 10.
Measles ...	3	4	—	—	8	2	2	—	8	1
Scarlet Fever ...	—	—	—	—	—	—	—	—	—	—
Whooping Cough ...	2	5	5	2	6	2	1	—	2	9
Diphtheria ...	—	—	—	—	—	—	—	—	2	—
Membranous Croup ...	—	—	—	—	—	—	1	—	1	1
Epidemic Influenza ...	—	—	—	—	1	—	—	—	—	1
Diarrhœa ...	33	30	22	35	18	47	8	13	30	35
Erysipelas ...	—	—	—	—	—	—	—	—	—	—
Accidents (General) ...	1	1	—	2	1	1	3	5	4	—

Table 12.

Rates of Infantile mortality in Rhondda and the 76 Great Towns in England and Wales, as given by the Registrar-General.

		Per 1,000			Per 1,000
Town		Births.	Town.		Births.
1	Hornsey ...	62	39	Wolverhampton ...	132
2	Leyton ...	77	40	Newport (Mon.) ...	133
3	Hastings ...	81	41	Smethwick ...	134
4	Bournemouth ...	83	42	South Shields ...	135
5	Kings Norton ...	85	43	Warrington ...	135
6	Handsworth (Staffs) ...	87	44	Birkenhead ...	136
7	Coventry ...	96	45	Newcastle-on-Tyne ...	137
8	Tottenham ...	96	46	Tynemouth ...	137
9	Northampton ...	97	47	Leeds ...	139
10	Portsmouth ...	99	48	West Bromwich ...	139
11	Willesden ...	99	49	Grimsby ...	140
12	Reading ...	100	50	Sheffield ...	141
13	Croydon ...	101	51	Liverpool ...	142
14	Halifax ...	101	52	Bradford ...	143
15	Wallasey ...	103	53	Birmingham ...	145
16	Brighton ...	104	54	Hull ...	145
17	Walthamstow ...	106	55	Nottingham ...	146
18	York ...	106	56	Bootle ...	147
19	Ipswich ...	107	57	Sunderland ...	147
20	East Ham ...	110	58	Rotherham ...	148
21	Barrow-in-Furness ...	111	59	Walsall ...	148
22	Burton-on-Trent ...	112	60	Blackburn ...	150
23	Derby ...	112	61	Bolton ...	150
24	Huddersfield ...	112	62	Gateshead ...	150
25	London ...	113	63	Manchester ...	152
26	Southampton ...	113	64	Swansea ...	152
27	West Hartlepool ...	114	65	Salford ...	153
28	Norwich ...	116	66	Stockton-on-Tees ...	153
29	St. Helens ...	123	67	Preston ...	154
30	Devonport ...	125	68	Wigan ...	157
31	Great Yarmouth ...	125	69	Middlesbrough ...	160
32	Cardiff ...	126	70	Oldham ...	160
33	Aston Manor ...	127	71	Hanley ...	166
34	Bristol ...	127	72	Stockport ...	168
35	Plymouth ...	129	73	Rochdale ...	169
36	West Ham ...	129	74	Merthyr Tydfil... ..	179
37	Bury ...	131	75 Rhondda ...	... 184	
38	Leicester ...	132	76	Burnley ...	201

Table 13.

Zymotic Death-rates in the 76 Great Towns of England and Wales for 1908, based upon the estimated population at Mid-summer, as given by the Registrar-General.

Town.	Death Rate.	Town	Death Rate.
1 Hastings ...	... '42	39 Leicester ...	... 1'50
2 Hornsey ...	... '58	40 Leeds ...	... 1'51
3 Brighton ...	... '63	41 Wallasey ...	... 1'52
4 Bournemouth ...	... '72	42 St. Helens ...	... 1'53
5 Northampton ...	... '72	43 Blackburn ...	... 1'54
6 West Hartlepool ...	... '72	44 Smethwick ...	... 1'54
7 Leyton ...	... '83	45 Huddersfield ...	... 1'58
8 Handsworth (Staffs) ...	... '86	46 Swansea ...	... 1'60
9 Kings Norton ...	... '86	47 Tynemouth ...	... 1'60
10 Ipswich ...	... '89	48 Gateshead ...	... 1'65
11 Plymouth ...	... '92	49 South Shields ...	... 1'67
12 Derby ...	... '93	50 Bolton ...	... 1'70
13 Great Yarmouth ...	... '94	51 West Bromwich ...	... 1'82
14 Portsmouth ...	... '96	52 Sheffield ...	... 1'83
15 Walthamstow ...	... '98	53 Sunderland ...	... 1'85
16 Willesden ...	... 1'00	54 Wigan ...	... 1'85
17 Halifax ...	... 1'01	55 Birmingham ...	... 1'86
18 Burton-on-Trent ...	... 1'06	56 Birkenhead ...	... 1'90
19 Barrow-in-Furness ...	... 1'08	57 Aston Manor ...	... 2'00
20 Cardiff ...	... 1'10	58 Hanley ...	... 2'00
21 Coventry ...	... 1'10	59 Walsall ...	... 2'07
22 Norwich ...	... 1'13	60 Rochdale ...	... 2'17
23 Bristol ...	... 1'15	61 Hull ...	... 2'19
24 York ...	... 1'15	62 Liverpool ...	... 2'20
25 Southampton ...	... 1'18	63 Preston ...	... 2'23
26 Bury ...	... 1'21	64 Manchester ...	... 2'26
27 Tottenham ...	... 1'21	65 West Ham ...	... 2'38
28 Wolverhampton ...	... 1'21	66 Warrington ...	... 2'41
29 Devonport ...	... 1'22	67 Stockport ...	... 2'44
30 Nottingham ...	... 1'25	68 Oldham ...	... 2'50
31 Newcastle-on-Tyne ...	... 1'26	69 Bootle ...	... 2'51
32 East Ham ...	... 1'28	70 Merthyr Tydfil ...	... 2'51
33 Newport (Mon) ...	... 1'29	71 Stockton-on-Tees ...	... 2'72
34 London ...	... 1'36	72 Burnley ...	... 2'83
35 Reading ...	... 1'36	73 Rotherham ...	... 2'83
36 Bradford ...	... 1'37	74 Salford ...	... 3'04
37 Croydon ...	... 1'38	75 Middlesbrough ...	... 3'42
38 Grimsby ...	... 1'45	76 Rhondda ...	... 4'02

Table 14.

Showing the number of deaths in the Rhondda from the principal Zymotic Diseases since 1888.

Year,	Small-Pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Fevers.			Diarrhoea.	Total Zymotic Deaths	Zymotic Death-rate.	Average Zymotic Death-rate of Ten Years.
						Typhus.	Enteric.	Simple Continued,				
1888	—	20	16	2	27	—	23	—	17	105	1·3	2·7
1889	—	72	18	24	20	—	20	—	52	206	2·5	
1890	—	19	52	65	29	—	20	—	29	214	2·5	
1891	—	49	89	17	17	—	25	—	38	335	3·7	
1892	—	44	43	19	20	—	32	—	46	204	2·2	
1893	1	43	23	12	30	—	91	1	85	286	3·0	
1894	—	13	12	30	29	—	28	—	28	140	1·4	
1895	—	79	27	72	66	—	25	—	75	344	3·4	
1896	—	38	43	63	54	—	28	3	144	373	3·6	
1897	—	138	19	52	78	—	28	—	61	376	3·6	
1898	—	16	14	33	146	—	40	1	105	355	3·3	3·4
1899	—	—	10	70	186	—	55	—	169	489	4·4	
1900	—	121	35	58	125	—	24	—	118	481	4·3	
1901	—	3	43	33	136	—	53	—	327	595	5·2	
1902	1	109	27	40	81	—	21	—	109	389	3·3	
1903	—	8	38	52	42	—	44	—	109	293	2·4	
1904	—	102	20	53	32	—	42	—	211	460	3·7	
1905	—	84	11	55	16	—	15	1	172	354	2·8	
1906	—	24	9	27	25	—	20	—	206	311	2·4	
1907	—	68	9	26	20	—	22	—	147	292	2·2	
1908	—	102	7	54	32	—	21	—	319	535	4·0	

Table 15.—Comparing the Death-rates from Zymotic Diseases during the years 1888-1908 in the Rhondda with those of similar diseases in England and Wales (per 1,000 living).

Year.	Small-pox.		Measles.		Scarlet Fever.		Whooping Cough.		Diphtheria.		FEVERS.				Diarrhoea.		Tot'l Zym-otic Deaths		Zymotic Death-rate.	
	Rhondda.	England and Wales.	Rhondda.	England and Wales.	Rhondda.	England and Wales.	Rhondda	England and Wales.	Rhondda.	England and Wales.	Typhus.	Rhondda.	England and Wales.	Simple-con.	Rhondda.	England and Wales.	Rhondda.	Rhondda.	Rhondda.	England and Wales.
1888	—	.04	.25	.35	.20	.22	.02	.43	.34	.17	—	—	.006	.29	.17	—	.01	.21	.45	105
1889	—	.001	.88	.52	.22	.23	.29	.43	.24	.18	—	—	.005	.24	.18	—	.01	.63	.65	206
1890	—	—	.22	.44	.60	.24	.76	.47	.33	.17	—	—	.005	.23	.18	—	.01	.33	.60	214
1891	—	.002	.54	.44	.99	.17	.19	.47	.19	.17	—	—	.005	.27	.17	—	.01	.42	.47	235
1892	—	.01	.48	.46	.47	.19	.20	.45	.21	.22	—	—	.003	.35	.14	—	.008	.50	.50	204
1893	.01	.05	.45	.37	.24	.23	.12	.34	.32	.31	—	—	.005	.97	.23	.01	.009	.90	.95	286
1894	—	.03	.13	.39	.12	.16	.31	.41	.30	.29	—	—	.004	.29	.16	—	.007	.29	.35	140
1895	—	.007	.80	.38	.27	.15	.73	.31	.67	.25	—	—	.002	.25	.18	—	.005	.76	.87	344
1896	—	.02	.37	.57	.42	.18	.62	.43	.53	.27	—	—	.002	.27	.17	.02	.005	1.42	.55	373
1897	—	—	1.33	.10	.18	.14	.50	.31	.75	.27	—	—	—	.27	.15	—	—	.58	.85	376
1898	—	.01	.15	.41	.13	.11	.31	.31	1.37	.37	—	—	—	.37	.18	.009	—	.98	.96	355
1899	—	.01	—	.31	.09	.12	.64	.30	1.70	.50	—	—	—	.21	.20	—	—	1.55	.98	489
1900	—	.01	1.09	.39	.31	.12	.51	.34	1.12	.29	—	—	—	.21	.17	—	—	1.05	.69	481
1901	—	.01	.02	.27	.37	.13	.28	.30	1.18	.27	—	—	—	.46	.17	—	—	2.85	.91	597
1902	.008	.08	.90	.38	.23	.15	.34	.29	.69	.23	—	—	—	.18	.13	—	—	.93	.38	389
1903	—	.02	.06	.27	.31	.12	.43	.27	.35	.18	—	—	—	.36	.10	—	—	.91	.50	293
1904	—	.01	.83	.36	.16	.11	.43	.34	.26	.17	—	—	—	.34	.09	.008	—	1.72	.86	460
1905	—	—	.67	.32	.09	.11	.44	.25	.13	.16	—	—	—	.12	.09	—	—	1.38	.59	354
1906	—	—	.19	.27	.07	.10	.21	.23	.19	.09	—	—	—	.16	.09	—	—	1.61	.87	311
1907	—	—	.52	.36	.07	.09	.20	.29	.15	.17	—	—	—	.17	.07	—	—	1.13	.29	292
1908	—	—	.77	.22	.05	.08	.41	.27	.24	.15	—	—	—	.16	.07	—	—	2.40	.50	535
																		4.0		1.29

Table 16.

Actual number of deaths from All Causes and from the principal Zymotic Diseases in separate Wards during 1908.

WARDS.	Population.	All Causes.	Zymotic.	Small Pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Typhoid Fever.	Diarrhoea.
1	11,033	241	53	—	10	—	5	1	4	33
2	13,322	266	65	—	20	5	5	1	2	32
3	11,228	183	41	—	7	—	7	—	—	27
4	10,187	189	43	—	—	—	2	1	2	38
5	13,444	263	53	—	22	—	9	1	2	19
6	12,258	255	72	—	6	—	3	2	3	58
7	10,753	191	28	—	4	1	2	6	3	12
8	17,632	264	25	—	4	—	3	1	2	15
9	17,559	342	83	—	22	—	4	15	2	40
10	15,721	322	72	—	7	1	14	4	1	45
Rhondda	133,137	2,516	535	—	102	7	54	32	21	319

Table 17.

The Death-rate per 1,000 from All Causes, and from the principal Zymotic Diseases in the 10 Wards during 1908.

WARDS.	All Causes.	Zymotic.	Small Pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Typhoid Fever.	Diarrhoea and Epidemic Enteritis.
1	21·8	4·8	—	·9	—	·5	·09	·4	3·0
2	20·0	4·9	—	1·5	·4	·4	·08	·2	2·4
3	16·3	3·7	—	·6	—	·6	—	—	2·4
4	18·6	4·2	—	—	—	·2	·1	·2	3·7
5	19·6	3·9	—	1·6	—	·7	·07	·2	1·4
6	20·8	5·9	—	·5	—	·2	·2	·2	4·7
2	17·8	2·6	—	·4	·09	·2	·6	·3	1·1
8	15·0	1·4	—	·2	—	·2	·06	·1	·9
9	19·5	4·7	—	1·3	—	·2	·9	·1	2·3
10	20·5	4·6	—	·5	·06	·9	·3	·06	2·9
Rhondda	18·9	4·0	—	·8	·05	·4	·2	·2	2·4

Table 18.

Showing the number of cases, and incidence of the Notifiable Diseases in the Rhondda since compulsory notification was adopted in 1894.

1894	...	625	...	95,904	...	6·6
1895	...	933	...	98,356	...	9·5
1896	...	1,241	...	100,870	...	12·3
1897	...	1,031	...	103,445	...	9·9
1898	...	1,652	...	106,094	...	15·6
1899	...	2,700	...	108,807	...	24·8
1900	...	3,214	...	111,587	...	28·8
1901	...	3,039	...	114,439	...	26·6
1902	...	1,879	...	117,007	...	16·1
1903	...	1,597	...	119,652	...	13·3
1904	...	1,240	...	122,310	...	10·1
1905	...	534	...	124,988	...	4·3
1906	...	779	...	127,684	...	6·1
1907	...	773	...	130,400	...	5·9
1908	...	862	...	133,137	...	6·5

Table 19.
Scarlet Fever Notifications.

WARDS.	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
1	86	152	46	82	35	12	63	147	72	21	36	26	11	17	53
2	86	67	40	136	94	56	158	145	33	26	26	15	37	29	120
3	79	89	24	82	77	23	158	66	92	11	18	26	23	9	15
4	69	122	90	44	64	12	228	210	46	72	32	17	31	32	59
5	2	85	200	74	5	26	402	116	22	73	68	1	16	8	61
6	8	25	203	29	12	13	242	79	21	117	68	36	77	19	11
7	28	61	76	11	6	25	129	120	39	157	22	6	44	30	45
8	47	22	202	65	40	47	91	106	241	114	20	19	90	19	36
9	23	57	86	26	53	224	91	213	94	157	58	29	16	33	37
10	13	24	6	25	22	96	266	191	173	124	100	28	17	150	70
Rhondda	441	704	973	574	408	534	1828	1393	833	872	448	203	362	346	507

Table 20.—Scarlet Fever cases notified each month in the respective Wards in the Rhondda during 1908.

WARDS.	1		2		3		4		5		6		7		8		9		10		Monthly Total.
	Cases Notified.	Primary Cases.	Cases Notified	Primary Cases.	Cases Notified	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified	Primary Cases.	Cases Notified	Primary Cases.	Cases Notified	Primary Cases.	Cases Notified	Primary Cases.	Cases Notified.		
January	1	—	4	4	1	1	7	5	—	—	—	—	1	3	—	—	8	5	15	10	26
February	1	1	1	1	—	—	8	7	1	1	3	3	5	2	1	1	2	1	8	7	25
March	1	1	2	2	1	1	3	3	—	—	—	—	4	2	6	4	3	2	5	5	21
April	4	1	—	—	2	2	8	4	—	—	—	—	1	3	4	2	—	—	4	2	12
May	—	—	—	2	1	—	3	3	2	1	—	—	3	2	3	3	5	4	9	8	23
June	1	1	2	17	1	—	6	4	1	3	—	—	2	2	3	3	5	4	8	7	24
July	—	—	19	26	—	—	7	6	—	—	—	—	2	2	—	—	4	4	4	3	35
August	3	3	42	10	1	1	5	5	6	5	1	1	1	3	3	3	2	2	3	3	50
September	10	10	11	10	1	1	2	2	7	7	1	1	6	3	—	—	2	2	1	1	37
October	17	13	20	13	2	1	3	3	17	11	—	—	9	7	2	2	3	2	2	2	54
November	9	6	11	10	2	2	2	2	12	9	3	3	8	5	3	3	3	3	2	2	45
December	6	6	8	6	3	3	5	5	11	9	2	1	3	2	11	11	—	—	8	6	49
Rhondda...	53	42	120	91	15	12	59	49	61	48	11	10	45	32	36	32	37	29	70	56	507
																					401

Table 21.

Ages of those attacked with Scarlet Fever in the Rhondda during 1908.

Ages.			Under 1 Year.	1 to 2 Years.	2 to 3 Years.	3 to 4 Years.	4 to 5 Years.	5 to 6 Years.	6 to 15 Years.	15 to 25 Years.	25 years & Upwards.	All Ages.
Cases	...	...	4	29	40	48	64	75	218	16	13	507
Deaths	...	...	—	—	3	1	3	—	—	—	—	7
Per Cent of Deaths to Cases	...	...	—	—	7·5	2·1	4·7	—	—	—	—	1·4

Table 22.

Number of cases and deaths from Scarlet Fever in the Rhondda with case mortality during the years 1894-1908.

Year.		Number of cases notified.		Number of Deaths.		Mortality per cent of cases.
1894	...	441	...	12	...	2·7
1895	...	704	...	27	...	3·8
1896	...	973	...	43	...	4·4
1897	...	574	...	19	...	3·1
1898	...	408	...	14	...	3·4
1899	...	534	...	10	...	1·8
1900	...	1,828	...	35	...	1·9
1901	...	1,393	...	43	...	3·0
1902	...	833	...	27	...	3·2
1903	...	872	...	38	...	4·3
1904	...	448	...	20	...	4·4
1905	...	203	...	11	...	5·4
1906	...	362	...	9	...	2·5
1907	...	346	...	9	...	2·6
1908	...	507	...	7	...	1·4

Table 23.

Scarlet Fever Notifications, 1908, and ages of those attacked.

WARDS.		Under 1 Year.	1 to 2 Years.	2 to 3 Years.	3 to 4 Years.	4 to 5 Years.	5 to 6 Years.	6 to 15 Years.	15 to 25 Years.	25 Years and Upwards.	Total
1	...	—	2	5	4	5	7	28	1	1	53
2	...	—	10	6	9	14	18	56	4	3	120
3	...	1	1	3	—	1	3	5	1	—	15
4	...	2	6	6	9	8	9	18	—	1	59
5	...	—	2	9	8	10	7	22	2	1	61
6	...	—	—	1	1	1	1	7	—	—	11
7	...	1	2	2	1	9	3	24	3	—	45
8	...	—	3	—	6	1	5	21	—	—	36
9	...	—	1	3	5	4	4	16	2	2	37
10	...	—	2	5	5	11	18	21	3	5	70
Rhondda	...	4	29	40	48	64	75	218	16	13	507

Table 24.

Scarlet Fever cases in the Rhondda during 1908.

WARDS.		Total Fresh Cases.	Newly Infected Houses.	Ages of First attacked.				Attending no School.
				Under 3 Years.	3 to 5 Years.	5 to 12 Years.	12 Years & Upwards.	
1	...	53	42	3	6	29	4	8
2	...	120	91	10	17	59	5	30
3	...	15	12	3	—	8	1	4
4	...	59	49	8	15	25	1	19
5	...	61	48	8	16	23	1	24
6	...	11	10	1	2	7	—	4
7	...	45	32	2	8	17	5	13
8	...	36	32	2	6	22	2	9
9	...	37	29	1	8	15	5	11
10	...	70	56	6	13	30	7	24
Rhondda	...	507	401	44	91	235	31	146

Table 25.

Particulars as to the number of occupants in Scarlet Fever infected houses during 1908.

WARDS.		Number of Houses.	Number of Houses Letting Lodgings	Number of Occupants.			Persons per House.
				Occup'rs	Lodgers.	Total.	
1	...	42	21	250	50	300	7·1
2	...	91	53	451	107	558	6·1
3	...	12	4	63	17	80	6·7
4	...	49	18	282	60	342	7·0
5	...	48	35	289	84	373	7·8
6	...	10	5	62	15	77	7·7
7	...	32	11	186	36	222	6·9
8	...	32	20	155	49	204	6·4
9	...	29	14	174	30	204	7·0
10	...	56	36	300	95	395	7·1
Rhondda ...		401	217	2,212	543	2,755	6·9

Table 26.

At the end of December there were 78 cases of Scarlet Fever in 67 houses, distributed as follows :—

Wards.		Cases.		Houses.	
1	9	...	9
2	13	...	11
3	4	...	4
4	5	...	5
5	16	...	13
6	3	...	2
7	7	...	4
8	13	...	13
9	—	...	—
10	8	...	6
Rhondda	78	...	67

Table 27.
Diphtheria Notifications in the Rhondda.

WARDS.	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
1 ...	13	21	3	16	24	12	13	20	22	20	10	12	3	9	4
2 ...	5	4	8	68	92	59	96	135	174	36	10	9	5	6	10
3 ...	1	4	—	41	6	8	126	63	74	92	14	8	6	19	8
4 ...	—	6	12	20	22	4	119	292	100	42	31	32	17	16	20
5 ...	4	6	14	8	1	123	93	78	14	19	32	12	18	9	7
6 ...	—	—	12	21	139	177	28	71	8	16	70	19	30	12	9
7 ...	1	—	—	17	22	110	34	24	17	16	17	7	13	7	19
8 ...	3	14	7	16	348	803	195	151	98	47	13	19	25	15	28
9 ...	2	4	3	26	129	283	91	63	79	24	11	9	15	16	45
10 ...	—	7	20	14	100	225	307	231	171	15	6	12	62	68	35
Totals ...	29	66	79	247	883	1804	1102	1128	757	327	214	139	194	177	185
Deaths...	29	66	54	78	146	186	125	135	81	42	32	16	25	20	32
Per cent. of deaths to cases	100	100	68·3	31·5	16·8	10·3	11·3	11·9	10·7	12·8	14·9	11·5	12·9	11·3	17·3

Table 28.—The number of Cases notified, and Deaths registered, from Diphtheria during each month for the ten years 1899—1908.

MONTH.	1899		1900		1901		1902		1903		1904		1905		1906		1907		1908	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
January	177	15	138	22	78	10	80	5	47	4	27	2	16	1	18	3	34	5	16	4
February	199	13	79	8	48	9	68	3	31	3	17	2	13	2	11	3	20	1	14	2
March	204	18	61	9	90	14	93	6	28	3	18	4	16	1	11	3	13	1	13	—
April	89	15	40	5	73	13	97	10	34	7	17	3	14	1	19	1	14	2	15	2
May	191	22	73	8	75	8	55	1	20	3	11	3	8	2	11	1	17	2	17	2
June	176	19	93	10	70	13	58	8	23	2	20	5	8	—	10	—	5	1	18	3
July	232	17	168	15	145	16	67	17	24	4	12	2	12	1	10	2	6	1	22	4
August	112	13	89	9	67	10	35	5	19	3	8	2	5	3	4	2	13	—	13	4
September	95	17	104	9	114	9	25	2	10	1	19	—	10	—	37	6	17	1	13	1
October	108	10	88	11	99	11	47	3	19	1	31	2	15	1	33	—	15	1	13	3
November	115	14	98	13	94	11	61	10	30	6	27	4	10	1	19	—	11	1	17	3
December	106	13	71	6	75	11	71	11	21	5	7	3	12	3	11	4	12	4	14	4
Total	1804	186	1102	125	1128	135	757	81	327	42	214	32	139	16	194	25	177	20	185	32

Table 29.—Diphtheria cases notified in each month in the respective Wards in the Rhondda during 1908.

WARDS.	1		2		3		4		5		6		7		8		9		10.		Monthly Total.	
	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.				
Cases.																						
January	—	—	2	1	2	3	7	5	—	—	—	—	—	—	—	—	2	2	2	16	13	
February	—	—	1	1	—	—	1	1	—	—	2	—	3	—	1	—	1	4	4	14	13	
March	2	2	1	1	—	2	—	—	—	—	—	—	—	—	—	—	2	5	5	13	13	
April	—	—	1	1	—	—	—	—	—	—	1	—	4	—	2	—	6	5	1	15	14	
May	—	—	—	—	—	2	1	1	1	1	2	2	4	4	2	2	3	3	2	17	17	
June	—	—	1	1	—	—	—	—	—	—	—	—	3	3	3	3	4	5	3	18	16	
July	—	—	1	1	—	1	1	1	—	—	—	—	3	3	9	2	5	2	2	22	22	
August	1	1	—	—	—	—	3	2	1	1	—	—	—	—	2	2	5	5	1	13	12	
September	1	1	1	1	—	—	2	1	—	—	—	—	1	1	3	3	3	3	2	13	12	
October	—	—	1	1	—	—	—	—	2	—	—	—	—	—	1	1	7	2	2	13	13	
November	—	—	—	—	—	—	2	2	1	1	1	1	1	1	4	4	5	5	3	17	17	
December	—	—	1	1	2	—	3	2	2	2	1	1	—	—	—	—	2	2	5	14	13	
Rhondda ...	4	4	10	10	8	7	20	15	7	7	9	9	19	19	28	28	45	44	35	32	185	175

Table 30.

Ages of those attacked with Diphtheria in the Rhondda during 1908, with case death-rate.

Ages.			Under 1 Year.	1 to 2 Years.	2 to 3 Years.	3 to 4 Years.	4 to 5 Years.	5 to 6 Years.	6 to 15 Years.	15 to 25 Years.	25 Years & upwards.	All Ages.
Cases	...	...	5	9	13	18	25	21	80	8	6	185
Deaths	...	...	5	9	2	5	3	5	3	—	—	32
Per cent. Deaths to Cases			100	100	15·4	27·8	12·0	23·8	3·8	—	—	17·3

Table 31.

Diphtheria cases in 1908, and ages of those attacked.

WARDS.		Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 6 years.	6 to 15 years.	15 to 25 years.	25 years & upwards.	Total
1	...	—	1	—	1	1	—	1	—	—	4
2	...	—	1	—	1	2	—	5	1	—	10
3	...	—	—	1	—	—	2	3	—	2	8
4	...	1	—	2	1	4	1	8	2	1	20
5	...	—	—	—	—	3	—	3	1	—	7
6	...	—	—	2	—	1	2	2	1	1	9
7	...	2	2	2	3	1	1	6	2	—	19
8	...	—	1	1	3	6	2	14	—	1	28
9	...	2	3	2	6	2	6	22	1	1	45
10	...	—	1	3	3	5	7	16	—	—	35
Rhondda	...	5	9	13	18	25	21	80	8	6	185

Table 32.

Diphtheria cases in the Rhondda during 1908.

WARDS.		Total Fresh Cases.	Newly Infected Houses.	Ages of First Attacked.				Attending no School.
				Under 3 years.	3 to 5 years.	5 to 12 years.	12 years & upwards	
1	...	4	4	1	2	1	—	3
2	...	10	10	1	3	5	1	4
3	...	8	7	1	—	4	2	3
4	...	20	15	2	4	8	1	5
5	...	7	7	—	3	3	1	4
6	...	9	9	2	1	3	3	6
7	...	19	19	6	4	5	4	12
8	...	28	28	2	9	11	6	12
9	...	45	44	7	7	27	3	17
10	...	35	32	4	7	21	—	10
Rhondda		185	175	26	40	88	21	76

Table 33.

Particulars as to number of Occupants in Diphtheria infected houses during 1908.

WARDS.		Number of Houses.	Number of Houses Letting Lodgings	Number of Occupants.			Persons per House.
				Occu- piers.	Lodgers.	Total.	
1	...	4	2	22	2	24	6.0
2	...	10	7	50	12	62	6.2
3	...	7	1	39	2	41	5.9
4	...	15	3	87	5	92	6.1
5	...	7	3	34	9	43	6.1
6	...	9	6	45	19	64	7.1
7	...	19	7	110	21	131	6.9
8	...	28	12	152	30	182	6.4
9	...	44	26	242	67	309	7.0
10	...	32	15	185	30	215	6.7
Rhondda	...	175	82	966	197	1,163	6.6

Table 34.—Typhoid Fever Notifications.

WARDS.	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
1	...	5	21	17	13	17	19	70	22	19	23	15	9	20	23
2	...	4	8	55	13	17	14	40	1	7	18	4	22	35	5
3	...	11	3	1	25	5	13	37	4	1	5	—	2	1	1
4	...	10	42	8	87	39	16	39	20	9	150	13	17	9	4
5	...	38	34	31	23	19	14	19	10	7	10	3	3	39	9
6	...	10	12	15	34	16	6	4	3	4	221	31	21	8	16
7	...	12	4	19	17	25	3	12	16	33	12	8	12	7	3
8	...	7	7	37	86	50	27	28	9	175	25	15	18	11	16
9	...	40	13	19	43	115	42	22	13	9	11	12	21	8	8
10	...	18	9	8	20	59	18	37	19	11	5	7	1	11	11
Rhondda	...	155	153	210	361	362	172	308	117	275	480	108	126	149	96

Table 35.—Typhoid Fever cases notified in each Month in the several Wards in the Rhondda during 1908.

WARDS.	1		2		3		4		5		6		7		8		9		10		Monthly Total.	
	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	Primary Cases.	Cases Notified.	
January	8	1	1	—	—	—	—	—	2	2	—	—	1	1	4	3	1	—	6	3	23	10
February	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	2	—	3	—
March	—	—	—	—	—	—	—	—	1	1	2	1	—	—	1	1	—	—	1	1	5	4
April	1	1	—	—	—	—	—	—	1	1	2	2	1	1	—	—	—	—	1	1	5	5
May	4	3	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	5	4
June	3	3	—	—	—	—	—	—	—	—	2	3	—	—	—	—	1	1	—	—	6	6
July	2	1	—	—	—	—	—	—	—	—	2	3	1	—	3	2	1	—	—	—	9	7
August	—	—	1	1	—	—	—	—	3	3	2	2	1	1	2	2	1	1	—	—	10	10
September	1	1	—	2	—	1	1	1	—	—	2	2	—	—	2	2	1	1	—	—	8	8
October	3	1	—	—	—	—	—	—	1	1	1	1	—	—	—	—	—	—	—	—	8	5
November	—	—	—	—	—	—	1	1	1	1	1	1	—	—	—	1	1	1	1	1	6	6
December	1	—	—	—	—	—	2	2	—	—	1	1	—	—	2	2	2	2	—	—	8	7
Rhondda	23	11	5	3	1	1	4	4	9	9	16	15	3	3	16	14	8	6	11	6	96	72

Table 36.

Typhoid Fever in the Rhondda during 1908, and ages of those attacked with case death-rate.

Ages.			Under 1 year.	1 to 5 years.	5 to 15 years.	15 to 25 years.	25 to 65 years.	65 years & upwards.	All Ages.
Cases	—	9	44	22	21	—	96
Deaths	—	1	6	4	10	—	21
Per cent of Deaths to Cases	—	11·1	13·6	18·2	47·6	—	21·9

Table 37.

Showing the number of cases of Typhoid Fever, the number of deaths, and the case mortality since 1894.

Year.	Number of Cases Notified.		Number of Deaths.		Mortality per cent of Cases.	
1894	...	155	...	28	...	18·0
1895	...	153	...	25	...	16·0
1896	...	153	...	28	...	18·0
1897	...	210	...	28	...	13·0
1898	...	361	...	40	...	11·0
1899	...	362	...	55	...	15·0
1900	...	172	...	24	...	13·9
1901	...	308	...	53	...	16·8
1902	...	117	...	22	...	18·8
1903	...	275	...	44	...	16·0
1904	...	480	...	42	...	8·7
1905	...	108	...	16	...	14·8
1906	...	126	...	20	...	15·9
1907	...	149	...	22	...	14·8
1908	...	96	...	21	...	21·9

Table 38.

Typhoid Fever Notifications, 1908, and ages of those attacked.

WARDS.		Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 6 years.	6 to 15 years.	15 to 25 years.	25 to 65 years.	65 years & upwards.	All Ages.
1	...	—	—	—	—	3	—	9	6	5	—	23
2	...	—	—	1	—	—	—	1	2	1	—	5
3	...	—	—	—	—	—	—	—	1	—	—	1
4	...	—	—	—	—	—	—	—	1	3	—	4
5	...	—	—	—	—	1	—	4	1	3	—	9
6	...	—	—	1	—	1	2	6	4	2	—	16
7	...	—	—	—	—	—	—	2	—	1	—	3
8	...	—	—	—	—	1	2	6	5	2	—	16
9	...	—	—	—	—	1	1	4	1	1	—	8
10	...	—	—	—	—	—	—	7	1	3	—	11
Rhondda	...	—	—	2	—	7	5	39	22	21	—	96

Table 39.

Particulars as to the number of Occupants in Typhoid Fever infected houses during 1908.

WARDS.		Number of Houses.	Number of Houses letting Lodgings.	Number of Occupants.			Persons per House.
				Occu- piers.	Lodgers.	Total.	
1	...	11	5	66	17	83	7·5
2	...	3	2	18	7	25	8·3
3	...	1	1	1	5	6	6·0
4	...	4	3	17	11	28	7·0
5	...	9	7	43	18	61	6·8
6	...	15	9	87	22	109	7·3
7	...	3	1	14	1	15	5·0
8	...	14	7	71	18	89	6·4
9	...	6	3	35	8	43	7·2
10	...	6	4	33	6	39	6·5
Rhondda ...		72	42	385	113	498	6·9

Table 40.

Details of Inspected Houses in which notifiable Infectious Disease occurred during 1908.

WARDS.		Number of Houses.	Number of Houses letting Lodgings.	Number of Occupants.			Persons per House.
				Occu- piers.	Lodgers.	Total.	
1	...	65	34	378	88	466	7·2
2	...	105	62	527	126	653	6·2
3	...	26	11	127	36	163	6·3
4	...	79	30	442	85	527	6·7
5	...	69	50	387	123	510	7·4
6	...	41	25	221	70	291	7·1
7	...	64	23	360	68	428	6·7
8	...	79	43	400	104	504	6·4
9	...	87	49	487	118	605	7·0
10	...	106	61	579	149	728	6·9
Rhondda	...	721	388	3,908	967	4,875	6·8

Table 41.—Deaths from Diarrhoea in the 6th, 7th, 8th, 9th, and 10th months, together with the rainfall and earth temperature at a depth of four feet.

Week Ended.	June.		July.				August.				September.				October.		Totals.			
	20	27	4	11	18	25	Aug. 1	8	15	22	29	5	12	19	26	Oct. 3		10	17	24
Rainfall in Inches ...	.25	.00	.00	3.30	2.39	.35	.13	.03	.06	1.29	4.28	3.04	1.01	1.15	1.04	.30	.30	.46	2.98	22.36
Mean Temperature 4 feet deep ...	55	56	56	56	55	56	57	57	56	55	55	55	55	54	54	54	56	55	54	
Ward No. 1	—	—	—	—	—	1	1	1	6	6	5	3	—	—	—	—	1	1	2	27
“ 2	—	—	—	—	—	—	2	4	5	6	4	2	—	—	4	—	—	—	—	27
“ 3	—	—	—	2	—	3	—	—	6	6	—	3	1	—	1	—	—	—	—	22
“ 4	—	—	—	—	2	1	1	1	5	4	4	2	1	—	3	2	—	—	1	27
“ 5	—	—	—	—	1	2	—	—	1	3	4	2	1	1	—	—	—	1	—	16
“ 6	—	—	2	—	—	3	4	5	5	5	5	3	1	1	—	1	1	3	1	40
“ 7	—	—	—	—	—	1	—	—	2	1	2	1	—	2	—	—	—	1	—	10
“ 8	—	—	—	—	—	—	—	—	—	—	7	—	2	—	1	3	1	—	1	15
“ 9	—	1	1	—	—	1	—	—	3	6	8	4	—	—	—	3	1	2	2	32
“ 10	—	—	—	1	—	1	1	2	6	9	7	7	—	2	—	1	2	—	—	39
Rhondda	—	1	3	3	3	13	9	13	39	46	46	27	6	6	9	10	6	8	7	255

Table 42.—Puerperal Fever Notifications.

WARDS.	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
1	...	4	2	1	—	—	—	4	6	—	1	1	1	—	1
2	...	2	2	1	—	3	2	3	4	2	3	—	2	2	—
3	...	—	—	—	—	1	—	2	—	3	1	—	—	1	1
4	...	—	4	—	—	—	—	—	3	1	—	3	3	5	1
5	...	8	6	7	2	5	4	1	7	1	2	2	3	3	2
6	...	1	1	5	5	4	3	6	4	1	6	2	1	5	6
7	...	—	—	2	6	3	1	6	2	2	—	1	1	2	4
8	...	1	2	2	3	4	2	2	—	2	5	1	1	3	1
9	...	1	2	—	4	1	1	2	10	7	4	2	3	9	3
10	...	—	1	—	1	2	6	2	7	2	—	1	3	1	4
Rhondda	...	17	20	21	16	21	23	19	28	43	21	22	18	31	23

Table 43.

Showing the number of deaths and death-rates from Puerperal Fever in the Rhondda during the years 1888-1908.

Year		Number of Deaths.		Death-rate per 1,000.	Average of Ten years.
1888	...	13	...	·16	·16
1889	...	6	...	·07	
1890	...	11	...	·12	
1891	...	24	...	·26	
1892	...	15	...	·16	
1893	...	20	...	·21	
1894	...	17	...	·17	
1895	...	12	...	·12	
1896	...	21	...	·20	
1897	...	10	...	·09	
1898	...	4	...	·03	·10
1899	...	16	...	·14	
1900	...	9	...	·08	
1901	...	21	...	·18	
1902	...	23	...	·19	
1903	...	11	...	·09	
1904	...	9	...	·07	
1905	...	4	...	·03	
1906	...	8	...	·06	
1907	...	16	...	·12	
1908	...	11	...	·08	

Table 44.

Showing the number of deaths and death-rates from Phthisis in the Rhondda during the years 1888-1908.

Year.		Number of Deaths.		Death-rate per 1,000.	Average of Ten years.
1888	...	88	...	1·13	·99
1889	...	102	...	1·25	
1890	...	84	...	·98	
1891	...	95	...	1·06	
1892	...	85	...	·93	
1893	...	77	...	·82	
1894	...	90	...	·93	
1895	...	82	...	·83	
1896	...	89	...	·88	
1897	...	108	...	1·04	
1898	...	103	...	·97	·81
1899	...	94	...	·86	
1900	...	83	...	·74	
1901	...	107	...	·93	
1902	...	99	...	·84	
1903	...	90	...	·75	
1904	...	115	...	·94	
1905	...	91	...	·72	
1906	...	82	...	·64	
1907	...	99	...	·75	
1908	...	103	...	·77	

Table 45.

The following Table gives the number of persons over 10 years of age, of known occupation, who died from Consumption during the year.

Blacksmith	...	...	...	...	1
Colliers	...	...	...	...	18
Colliery Clerk	...	...	...	...	1
,, Cogman	...	...	...	...	1
,, Engine Driver	...	...	...	...	1
,, Hauliers	...	...	...	...	3
,, Labourers	...	...	...	...	7
,, Lampmen	...	...	...	...	1
,, Mason	...	...	...	...	1
,, Shackler	...	...	...	...	1
,, Timekeepers	...	...	...	...	2
Dressmakers	...	...	...	...	2
General Labourers	...	...	...	...	3
,, Servants	...	...	...	...	3
Insurance Agent	...	...	...	...	1
Iron Moulder	...	...	...	...	1
Plasterer	...	...	...	...	1
Quarrymen	...	...	...	...	1
School Teacher	...	...	...	...	1

Table 46.

Causes of Death as recorded by Coroner's Inquests.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Accidents in Collieries ...	61	43	63	44	59	56	213	54	55	48
Alcoholism ...	2	1	1	—	—	2	1	—	—	1
Aneurism ...	1	1	—	—	—	1	—	—	1	1
Apoplexy ...	3	3	3	2	4	3	—	1	4	2
Blood Poisoning ...	—	1	—	—	2	1	1	—	—	1
Burns ...	12	6	14	13	7	7	8	6	9	16
Convulsions ...	10	8	10	10	10	11	4	2	6	7
Crushed by Falling Building ...	—	—	—	—	—	—	—	—	—	1
Crushed by Railway Wagon ...	—	—	—	—	—	—	—	1	—	—
Crushed by Wheel ...	—	1	—	—	1	—	—	—	—	—
Diarrhoea ...	—	—	—	—	—	1	—	—	—	—
Drowning ...	2	5	6	2	4	1	1	4	3	7
Embolism ...	1	—	—	—	—	—	—	—	—	—
Explosion ...	1	—	—	1	1	—	—	1	—	—
Falls ...	3	7	3	9	8	8	10	5	13	8
Fall from Bridge ...	3	—	—	—	—	—	—	—	—	—
Foreign Body in Air Passage ...	—	—	—	—	—	—	—	—	1	—
Found Dead... ..	—	1	3	1	1	1	—	1	—	1
Fracture of Spine ...	—	—	—	—	—	—	1	2	—	—
Heart Disease ...	11	6	7	11	10	10	13	12	17	17
Hæmorrhage... ..	—	—	—	—	—	2	2	1	1	2
Injudicious Feeding ...	—	1	—	—	—	—	—	—	—	—
Injury (character not stated) ...	1	—	3	—	—	—	—	—	1	—
Injury to Head ...	—	1	5	1	1	—	—	—	—	—
Kick of Horse ...	—	—	—	—	1	—	—	—	—	—
Malnutrition ...	1	—	—	—	—	—	—	—	—	2
Manslaughter ...	1	—	1	1	1	—	—	1	—	1
Meningitis ...	—	—	—	—	—	—	—	—	1	—
Misadventure ...	2	—	—	—	—	—	—	—	—	—
Murder ...	—	—	—	1	—	1	—	—	1	1
Myelitis ...	—	—	—	—	—	—	—	—	1	—
Natural Causes ...	3	3	1	5	3	2	7	1	1	4
Not known ...	—	—	—	—	—	—	1	—	—	—
Old Age ...	—	1	—	—	—	—	—	—	—	1
Overlain ...	—	4	2	—	—	—	—	3	—	4
Perforation of Stomach... ..	1	—	—	—	—	—	—	—	—	—
Peritonitis ...	—	—	—	—	—	1	—	—	—	1
Pneumonia ...	—	—	—	—	—	—	—	1	1	—
Poisoning ...	—	—	—	—	—	1	—	—	—	1
Poisoning (Ptomaine) ...	—	—	—	—	—	—	—	—	1	—
Run over by Brake ...	—	—	—	—	—	—	—	—	—	1
Run over by Cart ...	1	3	1	1	4	2	5	—	3	3
Run over by Motor Car ...	—	—	—	—	—	—	—	—	—	1
Run over by Train ...	3	2	2	1	2	—	1	—	3	1
Run over by Tram ...	1	—	3	—	—	—	—	—	—	—
Scalds ...	6	8	11	6	4	7	3	13	7	12
Scarlet Fever ...	—	1	—	—	—	—	—	—	—	—
Starvation ...	—	—	—	1	—	—	—	—	—	—
Suffocation ...	1	—	3	2	4	6	2	2	6	—
Suicide ...	3	2	1	2	1	1	4	8	3	9
Syncope ...	1	7	2	1	5	10	—	—	—	4
Rhondda	135	117	148	115	133	135	277	119	139	158

Table 47.

Showing the death-rate in the Rhondda, and the actual number of deaths from all causes, and from all causes excluding deaths from Colliery Explosions, during the years 1888-1908.

Year.	All Causes.			All Causes except from Colliery Explosions.		
	Number of Deaths.	Death-Rate per 1,000	Average of Ten Years	Number of Deaths.	Death-rate per 1,000	Average of Ten Years
1888	1,440	18·5	20·9	1,440	18·5	20·8
1889	1,645	20·2		1,645	20·2	
1890	1,756	20·6		1,756	20·6	
1891	2,255	25·4		2,255	25·4	
1892	1,805	19·8		1,805	19·8	
1893	2,132	22·8		2,132	22·8	
1894	1,706	17·7		1,706	17·7	
1895	2,246	22·8		2,239	22·6	
1896	2,105	20·8		2,049	20·4	
1897	2,049	20·1		2,049	20·1	
1898	1,979	18·8	19·0	1,979	18·8	18·8
1899	2,419	22·4		2,419	22·4	
1900	2,227	19·9		2,227	19·9	
1901	2,469	21·6		2,469	21·6	
1902	2,243	19·2		2,243	19·2	
1903	1,998	16·7		1,998	16·7	
1904	2,345	19·1		2,345	19·1	
1905	2,402	19·2		2,250	18·0	
1906	2,074	16·2		2,073	16·2	
1907	2,133	16·4		2,133	16·4	
1908	2,516	18·9		2,516	18·9	

Table 48.
New Houses. Plans passed.

Year.		Houses.		Shops.		Hotels.	Churches and Chapels.
1889	...	372	...	20	...	3	1
1890	...	829	...	17	...	2	6
1891	...	1,187	...	27	...	2	6
1892	...	883	...	25	...	1	3
1893	...	768	...	26	...	2	2
1894	...	1,317	...	39	...	—	6
1895	...	544	...	18	...	—	5
1896	...	459	...	26	...	1	3
1897	...	425	...	10	...	2	6
1898	...	156	...	22	...	2	3
1899	...	159	...	29	...	6	3
1900	...	345	...	16	...	2	2
1901	...	451	...	12	...	—	6
1902	...	849	...	14	...	—	9
1903	...	1,036	...	21	...	1	6
1904	...	527	...	10	...	1	6
1905	...	796	...	14	...	—	3
1906	...	735	...	2	...	—	3
1907	...	856	...	16	...	2	5
1908	...	1,134	...	13	...	—	7

During 1908, there were passed for occupation 829 buildings.

Table 49.

Summary of Inspector's Work, 1908.

DISTRICT		1	2	3	4	5	6
Accumulation of Refuse	...	18	31	30	26	25	31
Accumulation of Manure	...	29	6	32	19	20	18
Blocked Drain	...	179	213	98	175	144	97
Blocked W.C.	...	65	111	88	92	98	52
Defective Drain	...	50	22	27	22	81	80
Lip-trap to Gully-trap	...	7	33	5	7	6	34
Unventilated Drain	...	3	—	3	—	—	16
Defective Ventilating Pipe	...	15	3	3	7	6	3
Waste pipe direct	...	—	1	—	—	—	2
No Water in W.C.	...	60	56	30	53	95	108
Dilapidated or Filthy W.C.	...	89	124	190	63	38	153
No W.C.	...	1	—	—	1	—	—
Dilapidated Back Area	...	69	95	81	56	37	111
Defective or no Rain Water Shutes	...	133	168	87	64	97	116
Dirty Houses	...	14	9	8	17	18	27
Overcrowding	...	25	24	16	22	17	47
Animals as a Nuisance	...	9	12	6	27	16	1
Privy to W.C.	...	5	2	—	—	—	—
Damp and Dilapidated Houses	...	—	21	19	23	40	79
Houses without Water Supply	...	—	—	—	—	—	—
Other Nuisances	...	21	42	14	6	38	—

Table 50.

Summary of District Inspectors' work during 1908 as reported to M.O.H. each week.

DISTRICTS.	1	2	3	4	5	6
Cases of Infectious Disease investigated ...	224	125	117	102	117	177
Revisits to :—						
Infected houses ...	1875	869	699	485	855	1396
Unabated Nuisances ...	913	2141	993	829	1195	2259
Slaughter Houses ...	207	227	244	182	150	122
Lodging Houses ...	—	208	—	60	—	—
Bakehouses ...	291	272	197	262	278	241
Dairies ...	261	69	168	188	196	129
Factories and Workshops ...	22	64	21	82	54	156
House-to-house ...	2114	2221	2314	2636	2393	2408
New Buildings (Drains of) ...	398	252	403	455	405	189
Special complaints received ...	2	142	46	21	2	14
Letters written to abate Nuisances						
by Inspector ...	535	678	568	549	878	804
Referred to M.O.H. ...	70	130	64	53	92	61
,, ,, Council ...	26	118	47	108	72	61
New Buildings certified ...	142	83	103	107	306	88
Drain connections—						
No. of connections made ...	58	36	35	38	101	24
No. of houses connected ...	138	81	77	105	315	93
,, ,, ,, to date ...	4398	3887	4180	3345	4397	3927
,, ,, ,, unconnected...	115	51	71	87	72	72
Scavenging ;—Fines inflicted—						
Without Brush ...	—	—	—	—	10/-	2/6
Without Bell ...	—	—	—	—	10/-	2/6
Neglecting Back-lanes ...	30/-	—	—	—	77/6	20/-
Without Cover to Cart ...	2/6	—	—	—	27/6	7/6
Scavenging after 1 p.m. ...	22/6	5/-	—	10/-	10/-	—
Depositing on unauthorized ground ...	67/6	—	—	22/6	2/6	12/6
Failing to send out Cart ...	10/-	5/-	—	10/-	—	—
Leaving depôt gate unlocked ...	3/6	—	—	—	—	—

Table 51.

Workshops and Workplaces in the Rhondda in each Inspector's District.

	1	2	3	4	5	6	Total
Bootmakers ...	27	30	33	20	22	19	151
Bakers ...	32	31	26	24	26	25	164
Blacksmiths ...	2	4	4	4	4	3	21
Barbers ...	23	22	22	18	21	17	123
Basket Makers ...	—	—	1	—	—	—	1
Carpenters ...	9	17	15	9	11	15	76
Fried Fish Shops ...	16	16	11	12	13	7	75
Coachmakers ...	2	3	3	3	2	2	15
Cycle Repairers ...	2	2	2	—	—	—	6
Dressmakers ...	58	30	26	9	27	52	202
Dressmakers and Milliners (comb) ...	2	—	1	—	2	3	8
Glaziers ...	3	4	2	—	3	—	12
Jewellers ...	6	7	2	2	6	7	30
Milliners ...	18	18	11	7	12	12	78
Knitters ...	—	—	1	—	—	—	1
Picture Framers ...	7	7	1	—	1	—	16
Printers ...	2	1	—	—	2	1	6
Plumbers ...	8	5	2	2	3	1	21
Saddlers ...	3	2	1	2	2	3	13
Monumental Masons ...	3	—	1	3	1	3	11
Sweet Makers ...	1	4	—	—	—	—	5
Tailors ...	21	21	10	7	9	8	76
Tinmen ...	—	1	1	2	1	1	6
Quarries ...	7	11	12	8	14	9	61
TOTAL ...	252	236	188	132	182	188	1178

Table 52.

Premises requiring Periodical Inspection.

DISTRICT		1	2	3	4	5	6	Whole District
Bakehouses	...	33	31	26	27	27	26	170
Cowsheds	...	20	35	12	15	8	8	98
Dairies and Milkshops		31	39	31	26	24	16	167
Lodging houses	...	—	6	—	2	—	—	8
Slaughter-houses	...	9	7	11	6	3	3	39
Offensive Trades	...	—	1	1	—	—	—	2

Rhondda Urban District.

TABLE I.

Vital Statistics of Whole District during 1908 and previous years.

Year.	Population estimated to Middle of each year.	BIRTHS.		Total Deaths registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-Residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
		Number.	Rates.*	Under 1 year of age.		At all ages.					Number.	Rate.*
				Number.	Rate per 1,000 births registered.	Number.	Rate.*					
1	2	3	4	5	6	7	8	9	10	11	12	13
1898	106,094	4,120	38·8	793	192	1,979	18·6	27	3	20	1,999	18·8
1899	108,807	4,089	37·5	1016	248	2,419	22·2	35	—	25	2,444	22·4
1900	111,587	4,469	40·0	839	186	2,181	19·5	57	3	49	2,227	19·9
1901	114,439	4,586	40·0	1020	222	2,431	21·2	24	2	40	2,469	21·6
1902	117,007	4,937	42·2	883	178	2,190	18·7	23	3	56	2,243	19·2
1903	119,652	4,897	40·9	776	158	1,946	16·2	24	1	53	1,998	16·7
1904	122,310	4,860	39·7	923	189	2,301	18·8	47	9	56	2,345	19·1
1905	124,988	4,664	37·3	921	197	2,348	18·7	24	1	55	2,402	19·2
1906	127,684	4,751	37·2	821	173	2,014	15·8	29	4	64	2,074	16·2
1907	130,400	4,831	37·0	780	161	2,068	15·9	22	4	69	2,133	16·4
Averages for years 1898-1907.	118,297	4,620	39·1	877	190	2,188	18·6	31	3	49	2,233	19·0
1908	133,137	5,454	41·0	996	183	2,446	18·4	41	10	80	2,516	18·9

*Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

NOTE.—The deaths to be included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10, and the addition of the number in Column 11.

In Columns 5 and 6 the deaths of six residents under 1 year of age which occurred outside the district are not included.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public Institutions" to be taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses, and lunatic asylums.

Area of District in acres (exclusive of area covered by water) 23,885.

Total Population at all ages 113,735
 Number of Inhabited houses 19,210
 Average number of persons per house 5·9

At
 Census
 of 1901.

The Institutions
 in respect of the
 deaths in which
 corrections have
 been made are

The Cottage Hospital,
 Porth.
 Llwynypia Union, Trealarw
 Pontypridd Union,
 Pontypridd.
 The Infirmary, Cardiff.
 The Asylum, Bridgend.

Table II. Vital Statistics of Separate Localities in 1908 and previous years. (Continued on next page.)

YEAR.	WARD 1.				WARD 2.				WARD 3.				WARD 4.				WARD 5.			
	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d
	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 year.
1901	8,881		200	75	11,516		244	89	10,084		199	77	9,653		262	107	12,267		250	104
1902	9,768		175	62	11,677		237	94	10,690		171	68	9,685		202	84	12,142		232	88
1903	9,921	353	152	55	11,703	482	193	87	10,649	408	188	69	9,767	419	166	66	12,324	553	218	95
1904	10,249	362	173	74	12,013	494	225	98	10,882	379	197	72	9,989	433	172	60	12,569	578	233	78
1905	10,551	383	190	85	12,208	491	245	98	11,054	361	179	76	10,125	417	150	56	12,841	527	291	105
1906	10,579	375	177	76	12,363	468	190	88	10,887	427	176	71	9,924	442	180	67	12,819	543	201	80
1907	10,836	409	180	69	13,110	526	183	65	11,161	346	156	55	10,100	377	164	61	13,281	549	204	84
Averages of years 1903-1907	10,427	376	174	72	12,279	492	207	87	10,927	384	179	69	9,981	418	166	62	12,767	550	229	88
1908	11,033	488	241	106	13,322	567	266	103	11,228	420	183	60	10,187	457	189	90	13,444	614	263	111

Table II. (continued). Vital Statistics of separate localities in 1908 and previous years.

YEAR.	WARD 6.				WARD 7.				WARD 8.				WARD 9.				WARD 10.			
	Population estimated to middle of each year.	Births Registered.	Deaths at All Ages.	Deaths under 1 Year.	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 year.
1901	10,235		201	87	9,321		186	73	13,690		299	126	13,346		316	144	15,446		312	138
1902	10,501		195	88	9,650		187	84	14,783		280	97	13,740		258	94	14,401		306	124
1903	10,371	467	170	66	10,069	426	175	65	15,841	592	262	97	13,889	569	218	78	14,847	628	256	100
1904	10,989	465	285	110	10,355	433	204	94	16,198	494	280	106	14,629	592	278	106	15,044	630	298	127
1905	11,391	463	217	79	10,451	413	193	65	16,494	493	239	110	15,150	546	400	122	15,328	570	298	131
1906	11,679	490	222	100	10,294	393	165	68	16,655	449	257	84	15,453	554	246	89	15,339	610	260	105
1907	12,147	523	225	87	10,591	377	168	53	17,493	495	283	107	16,359	600	279	95	15,783	629	291	106
Averages of years 1903-1907	11,315	482	224	88	10,352	408	181	69	16,536	505	264	101	15,096	572	284	98	15,268	613	281	114
1908	12,258	577	255	117	10,753	430	191	64	17,632	583	264	104	17,559	685	342	123	15,721	633	322	124

NOTES: (a) Deaths of Residents occurring in public institutions beyond the district are included in sub-column C of this Table, and those of non-residents registered in public institutions in the district excluded.

(b) Deaths of residents occurring in public Institutions, whether within or without the district, are allotted to the respective localities according to the addresses of the deceased.

(c) Complete allocation is not possible for all years prior to 1903.

Table III. RHONDDA URBAN DISTRICT.

Cases of Infectious Disease notified during the year 1908.

Notifiable Disease.	Cases Notified in the whole District.						Total Cases notified in each Ward.										No. of Cases Removed to the Hospital from each Ward.										Total Cases removed to Hospital.						
	At all ages.	At Ages—Years.					1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10		H (Sp)	W	H			
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65																									65 and upwards.		
Small-pox
Cholera
Diphtheria (including Membranous Croup)
Erysipelas
Scarlet Fever
Typhus Fever
Enteric Fever
Relapsing Fever
Continued Fever
Puerperal Fever
Plague
TOTALS

NOTES.—The localities (Wards) adopted for this Table are the same as those in Tables II and IV.

H indicates “Tyntyla Isolation Hospital” Ystrad Rhondda (in Ward 4). Total available beds 36. Number of Diseases that can be concurrently treated 2.
H (sp) , “Penrhys Isolation Hospital” (Small Pox) Tylorstown Rhondda (in Ward 9). Total available beds 20. No. of Diseases that can be concurrently treated 1.

W. indicates “The Llwynypia Union” Treallaw, Rhondda (in Ward 6).

Table IV.—Causes of, and ages at, Death, during the Year 1908 (continued on next page).

[illegible]

Table V.—Rhondda Urban District. Infantile Mortality during the year 1908. Deaths from stated causes in Weeks and Months under one year of age. (Continued on next page).

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes.	(Certified	136	37	55	27	255	95	88	91	86	65	60	53	50	49	39	56	987
	Uncertified	7	2	...	...	9	3	...	...	1	...	...	1	...	...	1	...	15
i. Common Infectious Diseases.	{ Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Chicken-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Diphtheria (including Membranous Croup)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ii. Diarrhoeal Diseases.	{ Whooping Cough	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Diarrhoea, all form	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Enteritis, Muco-enteritis,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Gastro-enteritis	1	...	1	3	5	7	5	5	7	1	4	...	1	1	...	...	...
	{ Gastritis, Gastro-intestinal Catarrh	...	...	...	...	1	5	7	3	7	2	...	3	1	2	1	3	...
iii. Wasting Diseases.	{ Premature Birth	67	5	11	3	86	1	...	...	...	...	...	1	...	...	...	...	...
	{ Congenital Defects	...	6	1	...	9	3	1	3	1	...	...	1	...	1	...	...	...
	{ Injury at Birth	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...
	{ Want of Breast-milk,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Starvation	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Atrophy, Debility,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Marasmus	37	19	24	10	90	28	18	19	11	12	3	5	6	...	2	1	195

Rainfall Returns at Ty'nywaun Waterworks, Treherbert.

Height above Sea Level, 801 feet.

Furnished by Mr. OCTAVIUS THOMAS, Water Engineer to the Council.

Month.	YEAR 1899				YEAR 1900				YEAR 1901			
	Total Depth.	Greatest fall in 24 hours.		Days '01 or more fell.	Total Depth	Greatest fall in 24 hours.		Days '01 or more fell.	Total Depth.	Greatest fall in 24 hours.		Days '01 or more fell.
		Depth	date			Depth	date			Depth	date	
January ...	15'11	3'26	20	22	11'60	2'36	6	24	6'91	1'46	26	22
February ...	8'53	1'18	12	14	12'17	3'48	15	21	3'44	1'20	26	13
March ...	3'68	2'04	25	10	1'44	'50	18	8	6'25	1'51	29	15
April ...	9'04	1'15	6	22	4'37	'60	3	17	9'68	1'37	2	16
May ...	6'40	2'67	19	18	4'78	1'67	21	17	2'42	1'43	30	9
June ...	1'83	'82	30	9	6'47	1'30	24	18	3'94	1'85	20	11
July ...	1'31	'38	1	12	2'95	'90	31	12	2'25	1'15	25	10
August ...	2'90	1'18	29	9	7'50	1'58	6	16	7'57	2'31	13	17
September ...	4'37	'79	30	21	5'02	1'59	26	14	5'80	1'09	7	23
October ...	7'32	1'61	3	14	12'40	2'51	4	22	5'09	'87	17	22
November ...	7'60	2'14	7	12	9'90	1'87	15	24	4'33	1'32	11	10
December ...	5'96	1'33	28	23	16'30	1'61	30	24	14'00	2'73	7	24
Totals ...	74'05	3'26	20	186	94'90	3'48	15	217	71'78	2'73	7	192

	YEAR 1902				YEAR 1903				YEAR 1904			
	Total Depth.	Greatest fall in 24 hours.		Days '01 or more fell.	Total Depth	Greatest fall in 24 hours.		Days '01 or more fell.	Total Depth.	Greatest fall in 24 hours.		Days '01 or more fell.
January ...	5'80	1'31	1	19	14'45	2'15	4	25	13'84	2'42	26	23
February ...	3'86	'90	22	11	7'83	1'11	22	21	10'20	1'31	12	24
March ...	5'19	'94	14	19	15'84	2'28	17	30	4'31	1'21	28	18
April ...	4'21	1'35	21	14	3'70	'98	25	16	6'07	1'39	2	18
May ...	3'99	'75	16	23	5'77	1'92	16	20	5'22	1'36	23	23
June ...	4'91	'70	30	19	1'85	'50	14	7	2'86	'95	14	10
July ...	3'67	1'24	26	14	4'90	1'48	21	19	5'67	1'10	22	17
August ...	4'53	'91	18	24	13'80	2'25	20	23	6'46	1'36	3	17
September ...	2'72	'82	2	15	9'19	1'61	8	20	5'32	1'23	30	14
October ...	7'97	1'89	13	22	20'56	2'90	14	31	5'67	1'79	16	15
November ...	7'90	1'41	24	18	6'60	1'48	27	21	6'30	1'44	9	16
December ...	9'90	2'46	16	17	8'96	1'41	12	19	8'71	1'60	4	24
Totals ...	64'70	2'46	16	215	113'45	2'90	14	252	80'63	2'42	26	219

	YEAR 1905				YEAR 1906				YEAR 1907			
	Total Depth.	Greatest fall in 24 hours.		Days '01 or more fell.	Total Depth	Greatest fall in 24 hours.		Days '01 or more fell.	Total Depth.	Greatest fall in 24 hours.		Days '01 or more fell.
January ...	3'90	'75	8	16	15'75	1'47	24	26	5'48	1'79	1	23
February ...	4'16	1'12	25	19	7'66	'87	9	22	5'13	1'03	19	14
March ...	11'92	2'21	10	23	6'77	1'52	10	16	5'17	1'84	16	14
April ...	8'26	1'20	30	26	1'65	'49	24	13	6'00	'86	20	21
May ...	'48	'34	1	5	7'93	1'54	5	22	4'96	'95	1	18
June ...	9'15	1'62	20	18	3'20	'70	28	15	11'61	1'31	14	27
July ...	2'58	1'12	1	16	2'34	'37	22	20	5'65	1'04	22	19
August ...	10'61	2'38	4	23	6'88	1'59	1	19	9'28	1'47	8	24
September ...	4'93	1'15	9	16	2'53	1'30	14	10	2'32	'57	2	8
October ...	4'16	'80	29	14	13'31	1'73	2	27	11'02	1'06	29	30
November ...	7'03	1'31	10	21	8'18	1'28	20	21	6'33	1'20	22	20
December ...	3'53	1'03	7	14	5'09	'69	5	24	13'22	1'86	4	23
Totals ...	70'71	2'38	4	211	81'29	1'73	2	235	86'17	1'86	4	241

RAINFALL RETURN AT TY'NYWAUN WATER- WORKS, TREHERBERT.

5-inch Gauge. 801 feet above Sea Level.
1908.

MONTH.			Total Depth.	Greatest fall in 24 hours:		Days '01 or more fell.
January...	...	...	8'35	2'11	16	18
February	...	...	5'55	1'44	16	24
March ...	...	...	7'58	1'28	4	23
April ...	...	...	4'55	1'13	27	18
May ...	...	...	6'74	1'39	5	20
June ...	...	...	1'75	'60	13	9
July ...	...	...	8'41	2'18	9	13
August ...	...	...	10'36	2'56	31	15
September	...	...	5'57	'99	3	23
October...	...	...	3'87	'96	18	16
November	...	...	5'67	'93	21	17
December	...	...	8'92	1'41	15	27
Totals	...	...	77'32	2'56	31	223

Meteorological Returns.—The Hospital, Ystrad-Rhondda.
(Height above Sea Level, 590 feet).

MONTH.	YEAR 1902.				YEAR 1903.				YEAR 1904.			
	Total Rainfall in Month in inches.	Days on which '01 or more Rain fell.	Greatest fall in 24 hours.	Date of Greatest fall.	Total Rainfall in Month in inches.	Days on which '01 or more Rain fell.	Greatest fall in 24 hours.	Date of Greatest fall.	Total Rainfall in Month in inches.	Days on which '01 or more Rain fell.	Greatest fall in 24 hours.	Date of Greatest fall.
January ...	4.49	16	1.33	1	11.62	20	1.82	4	11.70	8	2.00	26
February ...	2.94	9	.90	22	5.04	17	1.15	22	8.64	7	1.38	12
March ...	4.35	13	.97	14	13.51	23	2.22	17	3.52	17	1.00	28
April ...	3.23	10	.87	4	2.44	10	.83	25	4.72	18	1.00	4
May ...	3.20	18	.52	27	4.46	18	1.57	16	4.70	14	1.54	23
June ...	4.07	18	.53	29	1.74	9	.58	14	2.25	6	1.00	14
July ...	2.87	9	1.20	26	5.83	13	1.13	22	5.28	13	1.15	25
August ...	4.64	17	.87	25	12.40	26	1.79	14	5.43	17	1.27	21
September ...	2.88	10	.65	23	7.46	20	1.24	10	5.10	13	1.00	30
October ...	6.76	16	1.28	13	17.74	31	1.98	14	3.21	11	1.24	7
November ...	5.60	16	1.25	8	4.53	18	1.24	27	5.27	14	1.43	7
December ...	6.69	14	1.24	16	7.61	16	1.29	3	7.09	21	1.04	4
Totals ...	51.52	166	1.33	1	94.38	221	2.22	17	66.91	159	2.00	26
	YEAR 1905.				YEAR 1906.				YEAR 1907.			
	Total Rainfall in Month in inches.	Days on which '01 or more Rain fell.	Greatest fall in 24 hours.	Date of Greatest fall.	Total Rainfall in Month in inches.	Days on which '01 or more Rain fell.	Greatest fall in 24 hours.	Date of Greatest fall.	Total Rainfall in Month in inches.	Days on which '01 or more Rain fell.	Greatest fall in 24 hours.	Date of Greatest fall.
January ...	2.26	15	.37	8	12.53	23	1.66	16	4.00	13	1.41	1
February ...	1.78	12	.40	25	5.47	21	1.10	15	3.94	12	1.06	19
March ...	11.09	22	1.97	10	4.36	11	1.05	10	3.64	11	1.20	15
April ...	5.22	20	.78	28	1.43	11	.53	24	5.31	19	1.00	8
May ...	.26	2	.14	31	6.11	16	1.76	5	4.56	17	.94	1
June ...	5.99	16	1.51	19	2.67	11	.85	28	7.64	25	1.31	14
July ...	1.93	11	.65	1	1.19	11	.33	22	3.98	14	.69	22
August ...	8.23	17	1.71	4	5.04	16	1.10	24	6.81	21	1.33	1
September ...	4.89	12	1.60	8	1.72	6	.77	14	1.76	8	.45	1
October ...	4.34	13	1.12	30	12.09	23	1.60	1	9.72	30	.82	10
November ...	6.76	19	1.18	22	6.32	16	1.25	20	4.69	18	1.06	22
December ...	2.87	12	.79	6	3.62	18	.40	9	11.55	20	1.75	4
	55.62	171	1.97	10	62.55	183	1.76	5	67.60	208	1.75	4
	YEAR 1908.											
	Total Rainfall in Month in inches.	Days on which '01 or more Rain fell.	Greatest fall in 24 hours.	Date of Greatest fall.	Total Rainfall in Month in inches.	Days on which '01 or more Rain fell.	Greatest fall in 24 hours.	Date of Greatest fall.	Total Rainfall in Month in inches.	Days on which '01 or more Rain fell.	Greatest fall in 24 hours.	Date of Greatest fall.
January ...	6.03	12	1.47	16								
February ...	4.27	22	1.75	16								
March ...	4.20	13	1.30	5								
April ...	3.96	14	1.14	27								
May ...	4.24	16	.84	14								
June ...	.95	5	.30	11								
July ...	6.17	13	1.86	9								
August ...	7.78	16	2.06	31								
September ...	4.24	18	.83	3								
October ...	4.01	12	1.70	19								
November ...	4.53	13	.83	12								
December ...	6.88	25	1.04	9								
Totals ...	57.31	179	2.06	31								

